

A SHORT
S Y S T E M
OF
POLITE LEARNING:
BEING AN
INTRODUCTION
TO THE
ARTS AND SCIENCES,
AND OTHER BRANCHES OF
USEFUL KNOWLEDGE.

THE SECOND EDITION, CORRECTED AND ENLARGED.

A taste of every sort of knowledge is necessary to form the mind,
and is the only way to give the understanding its due improvement
to the full extent of its capacity. LOCKE.

L O N D O N:
By M. Brown, St. John's Square,
PRINTED FOR J. WALKER, W. BENT, J. WALLIS, AND
E. NEWBERRY.
1800.

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A SYSTEM OF POLITE LEARNING.

OF ARTS AND SCIENCES.

Question.

WHAT mean you by a science?

Answer. A system of any branch of knowledge, comprehending the doctrine, reason, and theory of the thing, without any immediate application of it to the uses of life.

Q. What is an art?

A. A collection of rules and precepts for doing a thing surely; or, knowledge reduced into practice.

Q. How are the arts divided?

A. Into liberal and mechanical.

Q. What are the liberal arts?

A. Those that are ingenious, or cultivated without any immediate regard to the lucre arising from them; as poetry, music, painting, rhetoric, grammar, sculpture, &c.

Q. Why are they called liberal?

A. Because the ancients allowed them to be studied only by the *liberi* or free persons.

Q. What are the mechanical arts ?

A. Those wherein the hand and body are more concerned than the mind, and which are cultivated for the sake of the profit attending them: as weaving, turnery, masonry, carpentry, &c. popularly known by the name of *trades*.

Q. Why are they termed mechanical ?

A. They take their denomination from a Greek word [*mechane*] signifying a *machine*; as being all practiced by means of some machine or instrument.

Q. What are the principal sciences ?

A. Theology, philosophy, jurisprudence, physick, rhetoric, grammar, poetry, and mathematics.

THEOLOGY.

Q. WHAT is theology ?

A. A science which instructs us in the knowledge of God, and in the manner we should serve him.

Q. Whence is the word theology derived ?

A. From two Greek words [*Theos logos*] signifying *the word of God*.

Q. How is theology divided ?

A. Into natural and revealed: natural, is the knowledge we have of God from his works, by the

light of nature and reason; and revealed, is that which we obtain by faith and revelation.

Q. To whom was the title of theologist, or divine first given?

A. To St. John, the evangelist, who was by that title distinguished from the other three evangelists; because their gospels only contain the history of Christ, but that of St. John establishes his eternal divinity (as the word of God) and his incarnation.

RELIGION.

Q. What is religion?

A. That worship or homage due to God, considered as creator, preserver, and (with Christians) redeemer of the world.

Q. What is the foundation of religion?

A. That there is a God; and that he requires some service at the hands of his creatures.

Q. Whence is this knowledge obtained?

A. From the dictates of natural reason, and the express declaration of God himself, by the mouths of prophets, &c.

Q. Are there not several religions in the world?

A. There are four principal; the Christian, the Jewish, the Pagan, and the Mahometan.

Q. Who was the author of the Christian religion?

A. Jesus Christ, the Son of God, who left the

bosom of the Father, to dwell in flesh and blood here on earth; where, after performing many miracles, he was crucified and buried, but the third day he rose from the dead, and shortly after ascended to the Father.

Q. How is the Jewish religion founded?

A. On the Old Testament, and the law given by Moses to the Israelites.

Q. What is the Pagan religion?

A. The Pagans, or heathen nations, worship and adore false gods, or give those honours to creatures, and the works of man's hand, which are only due to God.

Q. Who founded the Mahometan religion?

A. The impostor Mahomed, in the seventh century, whose whole doctrine is a ridiculous compound of Paganism, Judaism, and Christian heresies.

Q. What are the advantages of religion?

A. It inspires sincerity in all men, justice in princes, integrity in magistrates, fidelity in subjects, honesty in trade, and union in families.

PHILOSOPHY.

Q. WHAT is philosophy?

A. The study of nature and morality, founded on reason and experience.

Q. Whence is the word philosophy derived?

A. From a compound Greek word [*philosophia*] signifying *the love of wisdom*.

Q. Into how many parts is it divided?

A. Two; theoretical and practical: the theoretical part is employed in the bare contemplation of nature, and natural things; and is subdivided into physics and metaphysics: the practical is that which lays down rules, and excites to the practice of a virtuous life; and is subdivided into logic and ethics.

LOGIC.

Q. What is logic?

A. The art of thinking justly; or of using reason well in our inquiries after truth, and the communication of it to others.

Q. In what does this art consist?

A. In the reflections made by men upon the four principal operations of the mind; perception, judgment, reasoning, and disposition.

Q. What are the advantages of logic?

A. It incites the mind to a closer application in thinking, so that we more easily discover the errors in our reasoning; and by reflecting on the order of the operations of the mind, we are brought to a more perfect knowledge of the nature of our own understanding.

ETHICS.

Q. How is ethics defined?

A. The doctrine of manners, or a science of morals, for the behaviour and conduct of man, either in public or private life.

Q. What is its object?

A. The exercise of right reason in all the circumstances of our actions, affairs, and reflections; so that we may arrive at the highest pitch of moral perfection and beatitude.

PHYSICS.

Q. What is physics?

A. The doctrine of natural bodies, their phenomena, causes, and effects, with their various affections, motions, operations, &c. It is also called *physiology*, and *natural philosophy*.

Q. In what does this science instruct us?

A. It teaches us to explain all the phenomena of the earth; as the atmosphere, meteors, earthquakes, tides, &c.

Of the Atmosphere.

Q. What is the atmosphere?

A. A thin, fluid, elastic substance, called *air*, which surrounds the earth to a considerable height; gravitates toward the center, on its surface; and

is carried along with it in its annual and diurnal motions.

Q. How is air distinguished?

A. Into elementary and heterogeneous.

Q. What is elementary air?

A. A subtile, homogeneous, elastic matter; the fundamental ingredient of the atmospherical air. This air enters into the composition of all bodies, existing in them under a solid form, deprived of its elasticity, and serving as their cement: it is the universal bond of nature, and in this state is called *fixed air*.

Q. What is heterogeneous air?

A. A coalition of corpuscles of various kinds, constituting that fluid mass wherein we live and move, and which we are continually receiving and expelling by respiration; the whole assemblage of this makes what is called *atmospherical air*.

Q. What are the principal effects of its gravity?

A. Air is 840 times lighter than water; but from the great height of the atmosphere, its gravity &c. so closely invests the earth, with all the bodies thereon, that it constringes and binds them down with a force amounting to upward of 15 pounds weight upon every square inch: hence it prevents the vessels of animals and plants from being too much distended by the impetus of the circulating blood and juices.

Q. Is not the atmosphere divided into several regions.

A. Into three; called the upper, middle, and lower: the air of the upper region is thinner and colder than that of the middle, and that of the middle still lighter or finer than the lower; so that the air is heaviest near the surface of the earth.

Of Meteors.

Q. What is a meteor?

A. A transient mixed body, or resemblance of a body, appearing in the atmosphere, formed out of the matter that floats there, and exhibiting various appearances.

Q. How are meteors divided?

A. Into three kinds; the igneous, aerial, and aqueous. The igneous kind are lightning, aurora borealis, ignis fatuus, falling stars, and other fiery phenomenons. The aerial consist of flatulent and spirituous exhalations; such are winds, whirlwinds, and hurricanes. The aqueous are composed of vapours, or watery particles, variously separated, and condensed by cold; such are clouds, rainbow, hail, snow, rain, dew, and the like.

Of Lightning and Thunder.

Q. What is lightning?

A. A large, bright flame, darting swiftly through

the air to a considerable distance, of momentary duration, and commonly attended with thunder.

Q. How is this meteor accounted for?

A. In the present advanced state of electricity, lightning is universally allowed to be an electrical phenomenon; for it has been proved by a variety of experiments, that the lightning of electricity, and the lightning which flashes from the clouds, are exactly of the same kind, and operate in the same manner.

Q. What is the cause of lightning?

A. The air being sometimes electrified positively, and sometimes negatively, it causes particular clouds, and different parts of the earth, to possess opposite electricities; so that on their approach a discharge will take place within a certain distance, or the one will strike into the other; and in the discharge a flash of lightning will be observed.

Q. How is thunder produced?

A. By a concussion in the air from an electrical explosion; and the rattling noise is probably owing to the sound being excited among clouds hanging over one another, and the agitated air passing irregularly between them.

Q. What is the reason that thunder is not heard till some time after the lightning is seen?

A. Because sound is much longer in arriving to our ears, than light to our eyes; for light moves

almost instantaneously, but sound moves no faster than 1142 feet in a second.

Q. I have heard of thunderbolts and their strange effects, pray what are they?

A. What is vulgarly called a thunderbolt, is only lightning when it acts with extraordinary violence, and breaks or shatters any thing. When the explosion is high in the air, it will do no mischief, but when near the earth it will kill animals, destroy trees, burn houses, &c.

Q. How can we ascertain its distance?

A. It may be estimated by the interval of time between the flash and the noise. The ordinary difference between the two is about seven seconds, which, at the rate of 1142 feet in a second, gives the distance about a mile and a half; but sometimes it comes in a second or two, which argues the explosion very near us, and even among us.

Of the Aurora Borealis.

Q. What is the aurora borealis?

A. An extraordinary luminous meteor, showing itself in the night after a dry season, chiefly in the northern part of the atmosphere; and hence the vulgar give it the name of *northern lights* or *streamers*.

Q. Pray describe this meteor?

A. It appears most commonly in the form of an arch, partly bright, and partly dark, but always

transparent, usually of a red colour, inclining to yellow, and sends out frequent coruscations of pale light, which seem to rise from the horizon in a pyramidal undulating form, and shoot, with great velocity, toward the zenith, or that point which is immediately over the head of the spectator.

Q. How is it accounted for?

A. It is deemed an electrical phenomenon, and supposed to be occasioned by the dashing of electric fire from positive toward negative parts of the atmosphere at a great distance, in the upper region where the resistance is least; and that it appears chiefly in the northern parts, as the alteration in the heat of the air is there the greatest.

Of the Ignis Fatuus.

Q. What is the ignis fatuus?

A. A common ignited meteor, chiefly seen in the night in meadows, marshes, and other moist places. It is known among the vulgar by the appellations, *Will with a wisp*, and *Jack with a lantern*.

Q. How is this phenomenon explained?

A. The late discoveries ascribe it to inflammable air, arising from the putrefaction and decomposition of vegetable substances in water, which takes fire by means of the electricity of fogs, and by falling stars, which are also of an electric

origin. In short, positive and negative electricity in the air, with a proper quantity of moisture to serve as a conductor, will account for these and other fiery phenomenons.

Of Wind.

Q. What is wind?

A. A sensible agitation of the air, by which a large quantity flows in a current out of one region into another.

Q. What are the causes of this agitation?

A. Local alterations in the state of the air, by heat. For when the air is heated over one part of the earth more than over another, the warmer air, being rarefied, becomes specifically lighter than the rest; it is therefore overpoised by it, and raised upward, the higher parts of it diffusing themselves every way over the top of the atmosphere; while the neighbouring lower air rushes in from all parts at the bottom, which it continues to do till the equilibrium is restored. Hence also we may account for the ascending of smoke up a chimney; and for the rushing of the air through the keyhole of a door, or any small chink, when there is a fire in the room.

Q. How are the winds divided?

A. Into four principal ones, the north, south, east, and west, which take their name from the four cardinal points of the world.

Q. What is the nature of each ?

A. The *north* wind is cold ; because it comes from the frigid zone, or countries remote from the influence of the sun : the *south* is warm ; because it comes from the torrid zone, or countries where the sun is most vertical : the *east* is dry ; because it comes from the great continent of Asia, where there are few rivers or seas : and the *west* is moist ; because it comes from the Atlantic ocean, where it imbibes a great quantity of vapour.

Q. Are the winds deemed beneficial ?

A. Beside their use in moving various machines, and their utility to navigation, they serve to purify and refresh the air, to convey the heat or cold of one region to another, and to produce a circulation of vapours from the ocean to inland countries. But, though their effects in the whole may be of great benefit, their violence is sometimes very detrimental. For,

When a violent and very sudden alteration happens in any particular part of the atmosphere, by means of a cloud, or some electrical cause, which occasions a rushing in of the air from all points, an impetuous wind is produced, turning rapidly every way, and sweeping all round the place. This is called a *whirlwind*. And,

When these causes are numerous and very violent, accompanied with lightning and thunder,

the wind becomes so furious and terrible, that it overthrows houses, roots up trees, and destroys every thing in its course. This is denominated a *hurricane*.

Of Clouds.

Q. What are clouds?

A. A collection of condensed vapour, suspended in the atmosphere.

Q. How are they formed?

A. From a collection of watery particles, raised from the earth by solar and subterraneous heat: the particles, at their first rise, are too minute and separated to be perceived; but meeting, in their ascent, with a greater degree of cold, they are condensed and their parts united, so as to reflect light and become visible.

Q. At what height do you suppose the clouds to be suspended.

A. From about a quarter of a mile to two miles; according to their specific gravity, and to the elasticity of the atmosphere. They are frequently visible below the tops of very high hills.

Q. Whence are their various forms and colours?

A. Their figure results from their loose texture, changing into any form according to the different currents of the air; and their colour is owing to their particular situation with regard to the sun, and the different reflections of his light.

It appears from the observable motions of the clouds, that there are different currents in the air at the same time, and in the same quarter, under one another.

Of the Rainbow.

Q. What is a rainbow?

A. A meteor in the form of a party-coloured arch, exhibited in a rainy atmosphere, opposite to the sun.

Q. Of what colours does it consist?

A. They are, beginning from the upper part, red, orange, yellow, blue, green, indigo, violet; and these are called the seven *primary colours*, for all other colours are composed of some of them.

Q. How is the rainbow formed?

A. It is made by the rays of the sun being refracted in the drops of falling rain, and thence reflected to the eye of a spectator, who is between the sun and the rain.

Q. How are the various colours produced?

A. By the different refractions of the rays, transmitted to the eye from several drops, one higher than another; the rays least refracted producing red, those most refracted violet, and the intermediate ones the other colours in the order before mentioned.

Q. I have sometimes observed two bows, one above the other; how are they accounted for?

A. The interior and stronger one, is produced by one reflection; the exterior and fainter, by two: when the latter is visible, its colours, lie in a contrary order to the other.

The doctrine of the rainbow is confirmed by an easy experiment: for upon hanging up a glass globe, full of water, in the sunshine, and viewing it in such a position as that the rays, which come from the globe to the eye, may, with the sun's rays, include an angle of about 42° , the spectator will see a *full* red colour in that side of the globe *opposite* the sun; and if that angle be made a little less, by depressing the globe or raising the eye, the other colours, yellow, green, and blue, will appear successively: but if the angle be made about 50° , there will appear a *faint* red colour in that side *toward* the sun; and if the angle be made greater, the other colours will be seen in their regular order.

Of Hail.

Q. What is hail?

A. An aqueous concretion, generally round, but sometimes angular, triangular, &c. according to the suddenness of its first formation, and the degrees of cold it passes through in its descent.

Q. How is it produced?

A. It is supposed to be formed in the higher regions of the air, where the cold is intense, and

where the electric matter is very copious : for in these circumstances, a great number of particles of water are brought near together, where they are frozen, and in their descent collect other particles ; so that the density of the substance of the hail-stone decreases from the center ; this being formed first in the upper regions, and the surface being collected in its falling through the lower :

Of Snow.

Q. How is snow produced ?

A. It is formed in the middle region of the atmosphere, of a particle of water there congealed, to which similar particles unite, and accumulating others in its descent, through a cold air, it falls to the earth in the form of little white flakes.

Q. Why are those flakes so light ?

A. Their lightness is owing to the excess of the surface, in comparison to the matter contained under it ; as gold itself may be extended in surface till it will ride upon the least breath of air.

Q. What is the cause of their whiteness ?

A. The particles of ice that compose those flakes being solid, transparent, and differently arranged, they reflect the light from every part.

Q. Of what benefit is snow to the earth ?

A. It furnishes a covering for corn and other vegetables, by which they are guarded from the intenser cold of the air, especially from cold pier-

ing winds, and the internal heat of the earth is prevented from escaping; it also, in melting, moistens and pulverizes the soil, which had been bound up by the frost, and thereby promotes vegetation.

Of Rain.

Q. What is rain?

A. A precipitated cloud, descending in form of drops of water; or snow dissolved in passing through the lower and warmer region of the atmosphere. Rain has therefore its origin in regions below those of snow and hail.

Q. How do you account for the various sizes of drops of rain?

A. In mountains, drops of rain, as well as flakes of snow, and hailstones, are very small; and all agree in this circumstance, that the more intense is the electricity that forms them, the larger they are. Their bulk is also increased from the length of their descent through a humid atmosphere, by attracting particles of vapour as they fall; for it is known, that a vessel placed on the top of a high tower, will not collect so much rain as another, of the same dimensions, set on the ground.

Q. What are the chief uses of rain?

A. It moistens and softens the earth, and thus fits it for affording nourishment to plants; by falling on mountains, it carries down with it many

particles of loose earth, which serve to fertilize the surrounding valleys ; it purifies the air from noxious exhalations, which tend in their return to the earth, to meliorate the soil ; it moderates the heat of the air ; and it is one means of supplying fountains and rivers.

Of Fog and Dew.

Q. What is fog ?

A. Fog, or mist, is a meteor, consisting of gross vapours, floating near the surface of the earth.

Q. How is it formed ?

A. By vapours raised from the earth, which meet, at their first entrance into the atmosphere, with cold sufficient to condense them considerably ; their specific gravity being thus increased, their ascent will be stopped at some particular height, and they will either remain suspended for some time, or return back in a kind of drizzly rain.

When these vapours are very light and subtile, become condensed before they arrive any considerable height, and return back in imperceptible drops ; it is then called *dew*.

Fogs are only low clouds, or clouds in the lowest region of the air ; and clouds are no other than fogs raised on high.

Of Earthquakes.

Q. What is an earthquake ?

A. A tremendous agitation of some considerable part of the earth, attended with a noise like thunder; and frequently with an eruption of wind or smoke, or else of water or fire; and is undoubtedly the greatest and most formidable phenomenon of nature.

Q. Whence the cause of these terrible phenomena?

A. Those of a superficial kind may have an electric origin; for, when a part of the earth is in a highly electrified state, the approach of a non-electric cloud will produce a sudden discharge, and occasion a violent commotion in the earth to many miles in compass. The principal agent of those that are interior and more tremendous is subterraneous fire.

Q. Please to explain those of subterraneous origin?

A. The earth abounds with subterraneous caverns, canals, and veins, some full of exhalations, and others full of water; and some parts replete with nitre, sulphur, bitumen, &c. which produce fire: hence, it is easy to conceive the terrible effects which may be occasioned from such confined air or water, when acted upon and greatly rarified by fire; especially if it be considered, that the expansive force of steam is twenty-eight times greater than the force of gunpowder.

Volcanos, or burning mountains, which emit flame, ashes, cinders, stones, liquid sulphur, and other substances, had their origin from earthquakes. There are many of them dispersed in all the quarters of the world: the principal of those in Europe, are Etna, or Gibel, in Sicily; Vesuvius, in Naples; and Hecla, in Iceland. And was it not owing to those vents for subterraneous fires, the effects of earthquakes would be more frequent and dreadful.

Of the Tides.

Q. What is meant by the tides?

A. Two periodical motions of the waters of the sea, called the flux and reflux, or the flow and ebb.

Q. Please to explain these motions?

A. The sea is observed to flow from the equator toward the north and south pole, for about six hours; in which motion, or flux, the sea gradually swells; so that, entering the mouths of rivers, it drives back the river waters toward their springs: after a continual flux of six hours, the sea seems to rest for about twelve minutes; and in this state it is called *high water*. When this pause is over, the ebb commences, and the sea retires back again, from the poles to the equator, for six hours more; in which time, the water sinking, the rivers resume their course toward the sea: after this reflux, the sea again rests another twelve minutes; and in this state it is called *low water*.

Q. How are these phenomenons accounted for?

A. They are occasioned by the attraction of the moon, which extends to the earth in so powerful a manner, as to draw up the waters of the ocean in a heap immediately beneath the moon; while the waters on the opposite side the earth, being feebly attracted, are very light, and the neighbouring waters pressing toward that place, they swell into a heap pointing to the opposite part of the heaven. Thus does the moon, in once going round the earth in $24\frac{3}{4}$ hours, produce two tides, or two flows and two ebbs.

Q. What are the causes of the tide rising much higher at one time than another?

A. The tides are highest about the new and full moon, and are called *spring tides*; for at these times the action of both the sun and moon are united, and draw in the same straight line, by which means the waters are more elevated; and this elevation is further increased the nearer those two luminaries are to the equator; consequently the highest spring tides are in March and September. The lowest tides are about the first and third quarter of the moon, and are called *neap tides*; for at these quarters the sun and moon act contrariwise, the sun raising the waters at the point where the moon causes them to be lowest; so that these tides are only occasioned by the difference by which

the attraction of the moon, which is nearest the earth, prevails over that of the sun.

Q. Whence proceed their other irregular motions?

A. The tides being principally caused by the moon, they consequently follow her apparent course from east to west, and her declination from north to south, beside the other motions which produce each flux and reflux: and all these motions would happen uniformly, was not the course of the water interrupted by a multitude of islands and continents, which cause a variety of appearances to be met with in different places.

METAPHYSICS.

Q. What is metaphysics?

A. A branch of science above or more sublime than physics.

Q. In what do these two sciences differ?

A. Physics treats of material or natural things, and judges of them from experience.

Metaphysics is applied to the contemplation of God, angels, and immaterial or spiritual things, and judges of them only by abstraction, and independent of material things.

JURISPRUDENCE.

Q. WHAT is jurisprudence?

A. The science of what is just and unjust; or the knowledge of the laws, rights, customs, ordinances, &c. necessary for the doing of justice,

Q. Whence is the word jurisprudence derived?

A. It is compounded of the Latin words *jus*, right, and *prudentia*, knowledge or skill.

Q. How are laws distinguished?

A. Into the law of nature, law of nations, and civil law.

Q. What is the law of nature?

A. That which nature and reason have taught mankind; as the power it gives to parents over their children.

Q. In what consists the law of nations?

A. In certain customs allowed of by all civilized nations against violating hospitality, or incroaching upon the privileges of ambassadors, &c. sent by one prince to another.

Q. What is civil law?

A. The peculiar law of every nation, ordained to provide for the public utility and necessity of the people considered as a body corporate. When this respects a city or borough, which enjoys particular privileges, it is called *municipal law*.

Q. Specify the several kinds of laws now used in England?

A. They are, 1st, the *civil law*, before mentioned; 2nd, *common law*, containing a summary of all the laws, rights, and privileges, in what is called Magna Charta, or great charter of English rights; 3d, *statute law*, consisting of statutes, acts, and ordinances of the king and parliament; 4th, *canon law*, a collection of constitutions, decisions, and maxims, for the rule and measure of church government; 5th, *martial law*, used in all military and maritime affairs; 6th, *forest law*, which relates to the regulation of forests and chases; to these may be added, 7th, the *law of custom*, which is remarkable in some parts of England.

PHYSIC.

Q. WHAT is physic?

A. Physic or medicine, is the knowledge of those things by whose application life is either preserved healthy, or when disordered, is restored to its pristine healthiness.

Q. How is the word physic derived?

A. From a Greek word (*phusis*) signifying *nature*; because medicine consists, principally, in the observation of nature.

Q. What are the principal branches of this science?

A. Anatomy, surgery, pharmacy, chymistry, and botany.

Q. Please to explain their several uses?

A. *Anatomy*, is the dissection, or taking to pieces, of the solid parts of the human body, in order to discover their structure and economy, their office and use, and their concern in health or diseases. It is not only of use in medicine, but also in painting, designing, statuary, &c.

Surgery, or chirurgery, consists in operations performed by the hand, for the cure of wounds, dislocations, fractures, tumours, ulcers, and the like. It has the advantage of medicine, in the solidity of its foundation, the certainty of its operations, and the sensibility of its effects.

Pharmacy, teaches the choice, preparation, and mixture of medicines; and consists in the knowledge and management of the several parts of the materia medica, now in the hands of the apothecaries.

Chymistry, is the art of resolving mixed bodies into their component parts, in order to separate the useles and ill, and collect and refine the good.

Botany, is the knowledge of plants, in all their states and relations; and the virtues of their several parts, when used in medicine and other affairs of life.

RHETORIC.

Q. WHAT is meant by rhetoric?

A. Rhetoric, or oratory, is the art of speaking justly, methodically, floridly, and copiously, upon any subject, in order to touch the passions, and to persuade.

Q. Whence is the word rhetoric derived?

A. From a Greek word [*retorike*] of the same signification.

Q. What are the requisite qualifications to excel in this art?

A. A good orator must be eminent in invention, disposition, elocution, memory, and pronunciation.

Q. Please to explain the purport of each?

A. *Invention*, is the finding out and choosing of such arguments for the proving or illustrating of the subject, as will move the passions, or conciliate the minds of the hearers.

Disposition, is the ranging of the arguments, invented or found out, in the most orderly and proper manner.

Elocution, is the choosing and adapting of words, or sentences, to the things, or sentiments, to be expressed.

Memory, is the retaining of every thing that is

learnt, belonging to the subject, in order to exhibit them as occasion requires.

Pronunciation, is the regulating and varying of the voice and gesture agreeably to the matter and words; so as more effectually to persuade and touch the hearers.

Q. How many parts has an oration?

A. Five; the *exordium*, narration, confirmation, refutation, and peroration.

The *exordium*, or preamble, is the beginning of the discourse; serving to gain the good opinion of the hearers, to secure their attention, and to give them a general notion of the subject. It ought to be clear, modest, and not too prolix.

The *narration*, is a recital of the facts as they happened, or as they are supposed to have happened. It ought to be perspicuous, probable, concise, and (on most subjects) entertaining.

The *confirmation*, is a strengthening of the cause, in undertaking to prove, by laws, reasons, authorities, and other arguments, the truth of the propositions advanced in the narration.

The *refutation*, or confutation, is a refelling and destroying of the arguments of the antagonist; by denying what is apparently false, detecting some flaw in the reasoning, or showing the invalidity of the proof. It should be sharp and lively.

The *peroration*, or conclusion, is a recapitulation of the principal arguments, summed up with new

force and weight, in order to excite the feeling of hatred or pity. It ought to be vehement, passionate, and concise.

GRAMMAR.

Q. WHAT is grammar?

A. The art of rightly expressing our thoughts by words, in discourse or writing.

Q. Whence is the word grammar derived?

A. From a greek word [*grammata*] which signifies *letters*.

Q. How is grammar divided?

A. Into four parts; etymology, orthography, syntax, and prosody.

Etymology, deduces and explains the origin, reason, and derivation of words, in order to arrive at their first and primary signification.

Orthography, teaches to write words justly, and with all the proper and necessary letters; it also includes the art of pronouncing them properly.

Syntax, is the constructing, or right ordering of words in a phrase or sentence, so as to make the meaning clear and distinct.

Prosody, treats of the true pronunciation of syllables, in respect of quantity and accent.

Q. What is meant by quantity and accent?

A. *Quantity* is the length of time taken up in

pronouncing a syllable ; and *accent*, the pronouncing of it with a higher or lower tone of voice.

Q. How many kinds of words are there ?

A. Nine ; commonly called *parts of speech*.

Q. What are their names ?

A. The article, noun, pronoun, verb, participle, adverb, preposition, conjunction, and interjection.

Q. Is it necessary to study the grammar of our own country ?

A. Most certainly, yes ; for without a competent grammatical knowledge of our own language, we should be ignorant of its beauties, and unable to express ourselves properly, correctly, or politely, on the most trifling occasions.

LANGUAGE.

Q. What is language ?

A. A set of words, or an assemblage of expressions, which chance or caprice has established among a certain people, by which they can communicate their thoughts to each other.

Q. Whence the origin of language ?

A. It is supposed to be of divine origin, and supernaturally communicated to the first man.

Q. Whence comes the diversity of languages ?

A. It is generally allowed to have taken its rise

from the confusion at the building of the Tower of Babel.

Q. What language is the most ancient ?

A. This point has been much controverted. The majority seem inclined to the Hebrew, deeming it the primitive language, and the source of all the rest : the Syriac has the next greatest number of advocates ; but many support the Greek ; others maintain the Tuetic ; and some prefer the Chinese.

Q. What are the principal languages now used ?

A. The Latin, Italian, Spanish, French, and English : and there is found a resemblance between the genius of each people and the language they speak.

Q. Please to explain this resemblance.

A. The Romans, who seemed only born to command, had a language noble, nervous, and august ; and their descendants, the Italians, are sunk into softness and effeminacy, which is as visible in their language, as in their manners. The language of the Spaniards is full of that gravity, and haughtiness of air, which make the distinguished character of that people. The French, who have great vivacity, have a language that runs extremely brisk and lively. And the English, who are naturally blunt, thoughtful, and of few words, have a language more concise and sententious, though far from being deficient in respect of copiousness.

Q. Who was the inventor of letters?

A. There being no authentic relation of any alphabetical character before the flood, the greater number of writers have contented themselves with tracing their origin to Moses, who is supposed to be the same with the Egyptian Thoth or Hermes.

Q. Who composed that orderly arrangement of the letters called the alphabet?

A. It is generally ascribed to Cadmus, king of Thebes: he first brought letters from Phenicia into Greece, about 1045 years before Christ; whence, in the following ages, they spread over the rest of Europe.

POETRY.

Q. WHAT is poetry?

A. The art of composing poems, or pieces in verse.

Q. How many kinds of poetry are there?

A. Two; epic and dramatic.

Q. Please to describe them both?

A. An *epic poem* is a composition in heroic verse, relating some important action, or extraordinary design. Such are, the Iliad, of Homer; the Eneid, of Virgil; the Paradise Lost, of Milton; &c.

A *dramatic poem* consists in action, is divided into acts, and represented by actors. Tragedies and comedies are of this sort.

Q. Are there not other kinds of poetry ?

A. The lower sorts of poetry are, the ode, elegy, satire, epigram, sonnet, &c. Those of the lowest order are, the acrostic, enigma, rebus, charade, &c.

Q. How is this art to be attained ?

A. The rules of poetry are taught by art, and acquired by study ; but the force and elevation of thought, which alone makes poetry of any value, must be derived from nature.

MUSIC.

Q. WHAT is music ?

A. The art of disposing and conducting sounds, under certain measures, that they may affect the senses in an agreeable manner.

Q. Whence is the word music derived ?

A. It is supposed to be originally formed from the Latin *musa*, *muse* ; the Muses being supposed to be its inventors.

Q. How is music divided ?

A. Into two parts, speculative and practical : The *speculative*, is the knowledge of music, and the method of producing sounds, in such relations of tune and time, as shall be agreeable in consonance, or succession, or both. The *practical*, is that which shows how grave and acute sounds, in

the relation they bear to music, may be ordered, and variously put together, so as to render them pleasing : this is called *composition*.

Some add a third branch, the *instrumental*, or the knowledge of instruments; but, as this depends altogether on the application or expression of the speculative part, it cannot come regularly under the definition.

Q. Had not music its origin in early times ?

A. It appears to have been one of the most ancient of arts; and, of all others, vocal music must undoubtedly have been the first kind: for man had not only the various tones of his own voice to make his observations on, before any other art or instrument was found out, but had the various natural strains of birds to give him occasion to improve his own voice, and the modulations of sounds it was able to express.

Q. Whence are the various musical instruments supposed to have been invented ?

A. The first invention of wind instruments is ascribed to the observation of the wind whistling in the hollow reeds. As for other kinds of instruments, there were so many occasions for using cords or strings, that men could not be long in observing their various sounds; which might give rise to stringed instruments: and for the pulsatile instruments, as drums and cymbals, they might arise

from the observation of the naturally hollow noise of concave bodies.

Q. Is not music in great repute ?

A. It has ever been in the highest esteem in all ages, and among all people ; nor could authors express their opinion of it strongly enough, but by inculcating that it was used in heaven, and was one of the principal entertainments of the gods and the souls of the blessed.

Q. What are the effects of music ?

A. It not only delightfully recreates the mind, and gives it new vigour for business, but by it diseases are said to have been cured, seditions quelled, passions raised and calmed, and even madness occasioned.

MATHEMATICS.

Q. WHAT is mathematics ?

A. A science that contemplates whatever is capable of being numbered or measured.

Q. What is the etymology of the word ?

A. It is derived from the Greek, and the original word [*mathefis*] signifies *discipline* or *science* ; for this had the start of all other sciences, and the rest took their common name from it.

Q. How is mathematics divided ?

A. Into pure and mixed : the *pure* considers

quantity abstractedly, and without any relation to matter or bodies; the *mixed* is interwoven with physical considerations.

Q. Of what use is this science?

A. It opens and extends our ideas, strengthens and improves our understanding, fixes our attention, and, by teaching a habit of just reasoning, prepares us for all other kinds of studies and important employments of life.

Q. What are its principal branches?

A. Arithmetic, geometry, mechanics, optics, astronomy, geography, chronology, and architecture.

ARITHMETIC.

Q. What is arithmetic?

A. The art of computing by numbers, with expedition and ease.

Q. What are its principal rules?

A. Addition, subtraction, multiplication, and division; and all the other rules or operations arise only from the different application of them.

Q. Please to explain the use of each?

A. *Addition*, teaches to find the amount of many numbers severally added together, to know their sum or total.

Subtraction, teaches to deduct or take a less number from a greater, to learn the precise difference.

Multiplication, teaches to increase any number, or to find the sum of any number added to itself, as often as there are units in another: so that it is a compendious kind of addition.

Division, teaches to find how often a less number is contained in a greater, or to divide any greater number into as many parts as there are units in the less; being a compendious method of subtraction.

Q. What are the other rules of arithmetic?

A. Reduction, rule of three, practice, interest, fellowship, extraction of roots, &c. what relates to annuities, pensions, &c. with every thing concerning commerce and book-keeping.

Q. To whom is this art necessary?

A. To every person; for it forms the mind, and disposes it to reason justly on all other sciences, and teaches men to dispose their affairs in good order: in short, it is the soul of trade, and the mother of all the sciences.

GEOMETRY.

Q. What is geometry?

A. A science teaching the mensuration of quantity, extension, or magnitude; that is, of lines, surfaces, or solids.

The word is from the Greek, which signifies *to measure the earth*. It had its rise among the Egyp-

tians, who were, in a manner, compelled to invent it, to remedy the disorders occasioned by the annual inundations of the river Nile, which bore away the bounds and landmarks of their estates.

Q. What is a line?

A. A quantity extended in length only, without either breadth or thickness. It is supposed to be formed by the motion of a point; and is to be conceived as the limit of a surface, and not as a part of that surface, however small.

Q. What is a surface?

A. A surface, or superficies, is a magnitude extended in length and breadth, but without thickness or depth. It is produced by the motion of a line; and is chiefly considered as the external part of a solid.

Q. What is a solid?

A. A magnitude endued with three dimensions, or extended in length, breadth, and depth. It is terminated, or contained, under one or more planes or surfaces, as a surface is under one or more lines.

Q. How is geometry divided?

A. Into four principal branches; altimetry, longimetry, planimetry, and stereometry.

Q. Explain the purport of each?

A. *Altimetry*, includes the measuring of lines, either in respect of height or depth, whether accessible or inaccessible.

Longimetry, is the art of measuring lengths and distances, both accessible, as roads, &c. and inaccessible, as arms of the sea, &c.

Planimetry, teaches the mensuration of planes or surfaces, which is performed by square measures; as square inches, square feet, &c. It includes *surveying*, or the art of measuring land; by taking the dimensions, laying down the same in a map or draught, and finding its content or area.

Stereometry, is the mensuration of all kinds of solid bodies by cubic measures; as cubic inches, cubic feet, &c. This includes *gauging*, or the art of finding the contents of any vessel, or the quantity of liquid contained therein.

MECHANICS.

Q. What is mechanics?

A. A science which considers motion, and moving bodies, their nature and laws; with the effects of mechanic powers, and of their various combinations, in the construction of machines or engines.

That part of mechanics which considers the motion of bodies arising from weight or gravity, is generally called *statics*.

Q. What is meant by mechanic powers?

A. Those machines which are used for raising greater weights, or overcoming greater resistances,

than could be effected by natural strength without them; the power or strength being applied to one part of the machine, and another part of the machine applied to the weight or resistance.

Q. How many mechanic powers are there?

A. Six; the lever, the wheel and axle, the pulley, the inclined plane, the wedge, and the screw.

Q. Please to describe each of them.

A. The *lever* is an inflexible bar, turning on a supporting prop as its center of motion. There are three kinds: 1, When the prop is between the weight and the power; such are iron crows, pincers, scissars, and the like: 2, When the weight is between the prop and the power; of this sort are the oars of a boat, and knives which are fixed at the point: 3, When the power is between the weight and the prop; of this sort are the muscular motions of animals, and the wheels of clocks and watches.

The *wheel and axle*, is contrived chiefly for the raising of weights to considerable heights; the power being applied to the wheel, and the weight drawn up by a rope winding round the axle.

The *pulley*, is a little wheel, or rundle, having a channel around it, and turning on an axis; and a rope which slides in its channel, has the power applied at one end and the weight at the other. An assemblage of these is called a system of pulleys: some of which are in a block, which is fixed;

and others in a block which is moveable, and rises with the weight.

An *inclined plane*, is like the chamfered part of an edgetool, which is ground down only on one side to the edge.

A *wedge*, in the common form, is like two inclined planes, joined together at their bases; and the thickness of these planes (opposite their sharp edges) make the back of the wedge, to which the power of the hammer is applied in cleaving wood.

The *screw*, may be considered as an inclined plane, wrapped round a cylinder, which is turned by a winch or lever: it is of great efficacy in raising weights, or in pressing bodies closely together.

Of these six simple machines, all the most compound engines in the world consist. As the screw includes the inclined plane, and two inclined planes make a wedge, we have all the mechanical powers combined together in a common *jack*, if it be turned by the fly; for then we have also the lever, the wheel and axle, and the pullies.

OPTICS.

Q. What is optics?

A. A science explaining the nature and laws of vision, whether natural, as performed by the eye, or artificial, as effected by instruments.

Q. How is vision produced?

A. Vision, or the act of seeing by the eye, is performed by rays of light reflected from an object and received in at the pupil, which rays are refracted in their passage, through the coats and humours, to the retina, and being thence conveyed, by the optic nerve, to the common sensory in the brain, the luminous object is perceived by the mind.

Q. What are the other benefits of this science?

A. Beside explaining the manner in which vision is performed in the eye, it treats of sight in the general: explains the several modifications which the rays of light undergo in the eye, and why some can only see near and others at a distance; shows why objects appear sometimes greater and sometimes smaller, sometimes distinct and sometimes confused, sometimes near and sometimes remote; and accounts for the theory of light, colours, and many other physical phenomena, otherwise inexplicable.

ASTRONOMY.

Q. What is astronomy?

A. A mixed mathematical science; teaching the knowledge of the celestial bodies, their magnitudes, motions, distances, periods, eclipses, and order.

Q. What is the use of this science?

A. By knowledge derived from astronomy, not only the bulk of the earth is discovered, the situation of countries ascertained, trade and commerce carried on to the remotest parts of the world, and its various products distributed for the health and comfort of mankind; but our very faculties are enlarged with the grandeur of the ideas it conveys, our minds exalted above the low contracted prejudices of the vulgar, and our understandings convinced of the existence, power, and goodness of the Supreme Being, who carries on the wonderful harmony and connection observable throughout the solar system.

Of the Solar System.

Q. What is understood by the solar system?

A. The Sun, with the planets and comets which move round him as their center.

Q. Give some particulars about the Sun?

A. The Sun, an immense globe of fire, is fixed in the center of the system, having a central motion only about his own axis in 25 days 6 hours, as is evident by observing the black spots seen on his disc or surface. He is about 763,000 miles in diameter; is near one million of times larger than the Earth; and by his rotation dispenses light, heat, and motion, to all the planets and comets revolving round him.

Q. What are the planets?

A. They are opaque spherical bodies, having no proper light of their own, but shine by the reflected light which they receive from the Sun; for only that side of them is illuminated, which is turned toward him.

Q. How many planets revolve round the Sun?

A. Seven; namely, Mercury, Venus, the Earth, Mars, Jupiter, Saturn, and the Georgian. These are called *primary planets*; and four of them are attended by satellites, or moons, called *secondary planets*, which respect the primary as their center of motion, and revolve round it, as the primary does round the Sun. Each primary planet describes a large orbit, nearly circular, round the middle or equatorial parts of the Sun; and, beside this revolution, each has a rotation, or central motion, on its axis: and both these motions, in all the planets, are made the same way, from west to east.

Q. Have not these two motions some particular denomination?

A. The revolution of a planet in its orbit, is called the *annual* or *yearly motion*; because it has all the alterations of the seasons, and varieties of the year, completed in that course round the Sun: and the rotation of a planet on its axis, is called the *diurnal* or *daily motion*; because, by this means, each part of its surface is carried successively toward and from the Sun, which illuminates that

half next him, making it day; while the other remaining in darkness, must constitute night.

Q. What particulars have you to mention concerning each of the planets?

A. *Mercury* is the nearest planet to the Sun, and goes round him in 87 days 23 hours of our time nearly; which is the length of his year: but being seldom seen, on account of his proximity to the Sun, and no spots appearing on his surface, the time of his rotation on his axis, or the length of his day, is unknown. His distance from the Sun is computed to be 37 millions of miles; his diameter 3200; and in his course round the Sun, he moves at the rate of 105,000 miles every hour.

Venus, the next planet in order, is computed to be 68 millions of miles from the Sun, and by moving at the rate of 76,000 miles every hour in her orbit, she completes her annual revolution in 224 days 17 hours. Her diameter is 7700 miles, and her diurnal rotation is performed in 23 hours 22 minutes. When she appears to the west of the Sun, she rises before him, and is called the Morning Star; and when to the east of the Sun, she shines after he is set, and is then called the Evening Star. This planet and Mercury, during the whole of their revolutions, appear, through a telescope, to have all the various shapes and appearances of the Moon: a proof that their orbits

- are included within the orbit of the Earth ; and hence they are called *inferior planets*.

The *Earth* is the next planet beyond Venus, at the distance of 95 millions of miles from the Sun. It completes its annual circuit in 365 days 5 hours 49 minutes, moving at the rate of 58,000 miles every hour ; which motion, though 120 times swifter than that of a cannon-ball, is little more than half the velocity of Mercury in his orbit. Its diameter is 7970 miles ; and by turning round its axis every 24 hours from west to east, it causes an apparent diurnal motion of all the heavenly bodies from east to west. This planet is attended by a satellite, or secondary planet, called the Moon, which respects the Earth for the center of its motion, going round the Earth from change to change in 29 days 12 hours 44 minutes, and accompanying it round the Sun every year. Her diameter is 2180, and her distance from the Earth 240,000 miles : she goes round her orbit in 27 days 7 hours 43 minutes, moving about 2290 miles every hour ; and turns round her axis exactly in the time that she goes round the Earth, which is the reason why the same face is always presented to our view.

Mars is the next in order, being the first beyond the orbit of the Earth, at the distance of 144 millions of miles from the Sun. He moves in his orbit at the rate of 55,000 miles every hour, and

completes his revolution in 1 year 321 days 23 hours, which is the length of his year. His diameter is 4200 miles; and his diurnal rotation is performed in 24 hours 39 minutes. He sometimes appears gibbous, but never horned, like the Moon, which shows that his orbit circumscribes that of the Earth: and hence Mars, Jupiter, Saturn, and the Georgian, are called *superior planets*.

Jupiter, the largest of all the planets, is at the distance of 490 millions of miles from the Sun; and by going at the rate of 29,000 miles every hour in his orbit, finishes his annual revolution in 11 years 314 days 12 hours. His diameter is computed to be 89,000 miles; and, by a prodigious rapid motion on his axis, he performs his diurnal rotation in 9 hours 56 minutes. The body of this planet is surrounded by several parallel faint substances, called Belts; and he is attended by four satellites, which revolve round him and enlighten him by night, as the Moon does the Earth.

Saturn is the next in the system, at about 900 millions of miles from the Sun; and, travelling at the rate of 22,000 miles every hour, performs his annual circuit in 29 years 167 days 5 hours. His diameter is computed to be 79,000 miles; and the motion on his axis is so rapid, that his diurnal rotation is performed in 10 hours 16 minutes. This planet has belts, similar to those of Jupiter, and is also surrounded by a thin broad ring, as

an artificial globe is by a horizon ; its breadth is about 21,000 miles, which is equal to its distance from the body of Saturn on all sides. He has also seven satellites, which go round him on the outside of his ring, and nearly in the same plane with it.

The *Georgian* is the remotest of all the planets, and was discovered to belong to this system, in 1781, by Mr. Herschell, of Bath. Its distance from the Sun is about 1800 millions of miles ; its magnitude about 90 times greater than that of the Earth ; and it revolves round the Sun in about 83 years. Six satellites, attendant upon it, have since been discovered.

Q. Can you form any measure to show the proportionate bulks of the planets ?

A. Supposing a globe of 24 inches diameter to be the size of the Sun, the proportionate diameter of Mercury would be about 1-eighth of an inch, of Venus, 1-fifth ; of the Earth, 1-fourth ; of Mars, 1-sixth ; of Jupiter, 2 inches 1-half ; of Saturn, 1 inch 9-tenths ; and of the Georgian, 1 inch 1-tenth.

Q. What might be the distances of the planets from the Sun, according to these proportions of their bulk ?

A. Mercury would be about 32 yards from the center of the Sun, Venus 60 yards, the Earth 82, Mars 126, Jupiter 430, Saturn 788, and the Georgian 1570 yards. In this proportion the

Moon's distance from the center of the Earth would be only 7 inches and a half.

Q. Can you assist the imagination in forming an idea of the vast distances the planets are from the Sun?

A. Suppose, that a body projected from the Sun should continue to fly with the swiftness of a cannon ball, which is at the rate of 480 miles in an hour; this body would reach the orbit of Mercury, in 8 years 290 days; of Venus, in 16 years 59 days; of the Earth, in 22 years 211 days; of Mars, in 34 years 82 days; of Jupiter, 116 years 166 days; of Saturn, 213 years 329 days; and of the Georgian, in 427 years 290 days.

Q. What are the comets belonging to this system?

A. They are opaque globular bodies, with transparent trains or tails, moving in very elliptical orbits round the Sun, and in all sorts of directions. They become visible to us only through the small parts of their course near the Sun, and remain lost to us through their immense journeys beyond the orbit of the most distant planet; so that their number and periods cannot be easily determined.

Q. How is their tails accounted for?

A. They seem to be owing to some luminous matter in their atmosphere, which is easily excited

by the Sun's heat, and thrown off in fiery vapours, toward the parts opposite to the Sun.

Q. What is an eclipse?

A. A privation of light in any of the heavenly bodies, caused by some other coming between the Sun and that body. There are various kinds of eclipses; but those of the Sun and Moon are most remarkable.

Q. How are they caused?

A. An eclipse of the Sun (or properly of the Earth) is caused by the Moon, as she revolves in her orbit, passing between the Sun and the Earth, and by that means sometimes intercepting his light from us. This can never happen but at the New Moon, and the eclipse begins at the west side of the Sun—An eclipse of the Moon is caused by the interposition of the Earth between the Sun and the Moon: this can only happen at the Full Moon; for the Earth, being then between the Sun and the Moon, will sometimes cast its shadow upon the Moon: and this eclipse begins on the east side.

Q. Are the planets ever eclipsed?

A. The bulk of the Sun, and the distances of the planets, being so great, the primary planets can never eclipse one another: but a primary can eclipse its secondary, or be eclipsed by it; and this is frequently the case with Jupiter and his satellites.

Of the Fixed Stars.

Q. What is meant by fixed stars?

A. The stars are said to be fixed, because they have been generally observed to retain the same situations with respect to each other. They are supposed to be of the same nature and magnitude with the Sun; shining with their own native lustre, and only diminished in appearance by their immense distance from us.

Q. How far is their distance?

A. The nearest is computed to be above 32 millions of millions of miles from us, which is further than a cannon-ball would fly in 7 millions of years: and it is very probable that they are situate as far from one another; for there is no visible alteration in their magnitudes, situations, and distances when viewed from different parts of the Earth's orbit; consequently, the orbit of the Earth, which is 162 millions of miles in diameter, is only a point in comparison to their distance. Hence it is easy to prove, that the Sun, seen from such a distance, would appear no bigger than a star; and that the surrounding system of planets and comets must be invisible from the nearest fixed star. From all this it is highly probable that each star is a sun to a system of planets, which, at different distances and in different periods, perform their revolutions

round it, though unseen by us with our best telescopes.

Q. What is the number of the stars?

A. Their real number can never be known; for as the power of our telescopes are increased, a greater number of them is discovered. The British catalogue, which includes a great many that cannot be seen without the help of a telescope, contains about 3000 only; and of this number, in the clearest night, the naked eye cannot discover above 1000.

There is a remarkable track round the heavens, called the *milky way* from its peculiar whiteness, which is single in some parts, in others double, and was formerly thought to be formed by an infinite number of very small stars; but the telescope shows it to be otherwise, and therefore its whiteness must be owing to some other cause.

Q. As the stars are fixed, what is the cause of their apparent motions?

A. Their rising and setting, is owing to the rotation of the Earth on its axis toward the east: and our seeing different stars, at different seasons of the year, is owing to the revolution of the Earth in its orbit round the Sun.

GEOGRAPHY.

Q. What is geography?

A. A mixed mathematical science, which in-

structs us in the doctrine or knowledge of the Earth, as it stands divided into land and water, for both these together constitute our globe.

Q. Is the study of geography necessary?

A. This science is not only curious and entertaining, but of the greatest use. It opens and enlarges the ideas; gives a true notion of the various situations of countries, with their rivers, mountains, &c; and is of such consequence in history, that nothing can be understood with justness and propriety without it.

Q. How is the Earth proved to be globular?

A. It is demonstrated to be a round body, from the observations of persons standing on shore and viewing a ship sailing from port; they first lose sight of the bottom of the vessel, then the sails disappear, and at last the flags on the top of the masts: and its orbicular shape is also confirmed by the many voyages which have been made round it. The unevenness of the surface on land, arising from hills and vales, can be no material objection to its rotundity; since the highest mountains bear no more proportion to the whole surface of the Earth, than the unevenness of the rind of an orange to the roundness of its figure.

Q. How is the land divided?

A. Into four principal parts, or quarters, called Europe, Asia, Africa, and America; and these are

subdivided into continents, islands, peninsulas, isthmuses, and promontories or capes.

A *continent* is a great extent of land, comprehending several regions or countries, without an entire separation of its parts by water.

An *island* is a smaller part of land, entirely surrounded by water.

A *peninsula* is a tract of land encompassed by water except at one narrow part, by which it joins the neighbouring continent.

An *isthmus* is a neck or narrow part of land which joins a peninsula to the continent.

A *promontory* is a hill, or point of land, stretching itself into the sea, the end of which is called a *cape*.

Q. How is the water divided ?

A. Into oceans, seas, lakes, gulfs, straits, and bays or creeks.

The *ocean* is a great and spacious collection of water, without any separation of its parts by land, and it encompasses the whole earth ; but it is generally divided into three extensive oceans, called the Atlantic, Pacific, and Indian Ocean.

A *sea* is a smaller collection of water, which communicates with the ocean, confined by the land.

A *lake* is a large collection of water, entirely surrounded by land.

A *gulf* is a part of the ocean running up into the land, and surrounded by it except at a narrow

passage by which it communicates with the ocean: if a gulf be very large, it is called an *inland sea*.

A *strait* is a part of the ocean restrained between two shores, and is the passage which joins a gulf and sea to each other or to the ocean.

A *bay* is an arm of the sea, larger in the middle than at its entrance, being a kind of lesser gulf; and when very small it is called a *creek*.

Q. Has not these divisions of land and water some resemblance to each other?

A. Yes: a continent resembles that of the ocean; an island encompassed with water, resembles a lake encompassed with land; a peninsula of land, is like a gulf or inland sea; an isthmus, whereby two countries are joined, resembles a strait, which unites one sea to another; and a promontory or cape of land, is like a bay or creek of sea.

Q. What is meant by the Old and New World?

A. Europe, Asia, and Africa, forming one large continent, are sometimes called the Old World, because they were known to the ancients; and America, which is another continent, is called the New World, because discovered so lately as the year 1492.

Q. Who was the discoverer?

A. Christopher Columbus, a native of Genoa, sent by Ferdinand king of Spain, through the in-

terest of queen Isabella, who raised money upon her jewels to defray the expence of his expedition.

Q. Why then is it called America?

A. Because Americus Vesputius, being sent afterward, discovered a greater part of the continent; and being a man of address, he obtained the honour of giving his name to half the globe.

Q. What is understood by the East and West Indies?

A. The East Indies, comprehends the Asiatic islands situate between the Indian and Pacific Oceans; and the West Indies, the islands in the Atlantic Ocean between the two continents of North and South America.

Of Europe.

Q. What are the boundaries of Europe?

A. It is bounded on the north by the Icy Sea; on the east by Russia in Asia, the Black Sea, and the Archipelago; on the south by the Mediterranean Sea, which divides it from Africa; and on the west by the Atlantic Ocean, which separates it from America; being 3000 miles long, and 2500 broad. It is the least quarter, but of the most renown for the temperature of the air; the fruitfulness of the soil; the study of the arts and sciences; but above all, for the establishment of the christian religion.

Q. How is Europe divided?

A. It is divided into many kingdoms and states, whose names and chief cities are as under.

	<i>Countries.</i>	<i>Chief Towns.</i>
British Empire.	England	London
	Scotland	Edinburgh
	Ireland	Dublin
	Norway	Christiania
	Denmark	Copenhagen
	Sweden	Stockholm
	Russia	Petersburgh
	Poland	Warsau
	Prussia	Berlin
	Germany	Vienna
	Bohemia	Prague
Nether- lands.	United Provinces *	Amsterdam
	Flanders	Brussels
	France	Paris
	Spain	Madrid
	Portugal	Lisbon
	Switzerland	Bern
Italy.	Lombardy, consisting of several small states†	
	Ecclesiastical State	Rome
	Naples	Naples

* These are Guelderland, Holland, Zealand, Utrecht, Friesland, Overysiel, and Groningen.

† These are Piedmont, Montserrat, Milanese, Parmasan, Modenese, Mantuan, Venice, Genoa, Tuscany, &c. and their chief towns are Turin, Casal, Milan, Parma, Modena, Mantua, Venice, Genoa, Florence.

Hungary

Presburgh

Turkey

Constantinople

The Europeans in general are well made, and tolerably fair, except in Spain, where they begin to be swarthy: the Spaniards and Hungarians wear whiskers; and the Turks long beards.

Q. What are the commodities of these countries?

A. In the north parts are pitch, tar, resin, hemp, deals, masts, furs, iron, coal, and tin. In the middle, corn, cider, hops, salt, lace, lawn, cambric, woollen and linen cloth, leather, clocks, watches, hardware, toys, paper, hats, gloves, and glass. In the south, wine, rice, raisins, oranges, lemons, marble, alum, amber, cotton, velvet, and mohair.

Q. What are the principal islands in this quarter of the globe?

A. Beside Great Britain and Ireland, included above in the British Empire, to the north of them is Iceland: in the Baltic, Zealand, Gothland, Funen; and in the Mediterranean, Ivica, Majorca, Minorca, Corsica, Sardinia, Sicily, Candia.

Q. What are the chief mountains?

A. The Dolphrins hills, between Sweden and Norway; the Hyperboræan mountains, in Russia; the Cheviot hills, between England and Scotland; the Pyrenees, between Spain and France; the Alps, between Italy and Germany; and the Appennines, which run through Italy from north to

south: beside these are Etna or Gibel, in Sicily; Vesuvius, near Naples; and Hecla, in Iceland, which are volcanic or burning mountains.

Q. What are the most noted rivers?

A. The Danube, which runs through Germany, Hungary, and Turkey; the Rhine, Elbe, and Oder, in Germany; Loire, Rhone, and Seine, in France; Douro and Tajo, in Portugal; Guadiana, Turio, and Ebro in Spain; Tiber and Po, in Italy; Wolga and Don, in Russia; Thames and Severn, in England; Forth and Tweed in Scotland; and Shannon and Liffey in Ireland.

Of Asia.

Q. What are the boundaries of Asia?

A. The Frozen or Icy Sea on the north; on the west it is separated from Africa by the Red Sea, the Isthmus of Suez, and the Levant or Mediterranean; and from Europe by the Archipelago, Sea of Marmora, Black Sea, Sea of Asoph, the river Don, and a line drawn from it to the river Tobol, and thence to the river Oby: on the east it is bounded by the Pacific Ocean, which separates it from America; and on the south by the Indian Ocean. It is about 4800 miles long, and 4400 broad, and deemed the principal quarter of the globe.

Q. Why does this quarter obtain the preference?

A. Because it was in Asia, according to the sacred annals, that the Garden of Eden was planted, and our first parents created; here once stood the famous Tower of Babel, the magnificent Temple of Solomon, and the renowned cities of Sodom, Gomorrah, Nineveh, Babylon, Troy, &c. In this country our Saviour was born, and completed the great work of our redemption; in short, it was the theatre of almost every action recorded in the holy scriptures.

Q. How is Asia divided?

A. The principal regions and kingdoms are as follow.

<i>Countries.</i>		<i>Chief Towns.</i>
Tartary.	Russian	Tobolsk
	Chinese	Chynian
	Mogul	No towns
	Independant	Samarcand
	China	Pekin
	Tonquin	Tong-tou
	Laos	Langione
	Cambodia	Cambodia
	Siam	Siam
	Malacca	Malacca
	Pegu	Pegu
	Burmah	Ava
	Thibet	Lassa

India.	{	Hindooftan Proper	Delhi, Calcutta
		Deccan	Hydrabad
		Myfore	Seringapatam
		Carnatic	Madras
		Persia	Schiras
		Arabia	Mecca
Turkey.	{	Syria	Aleppo
		Palestine	Jerusalem
		Natolia	Smyrna
		Diarbec	Diarbekar
		Irac Arabia	Bagdad
		Armenia	Erzerum
		Curdistan	Scherazer
		Georgia	Tefflis

The Turks, Persians, Moguls, and Chinese, are of good shape and complexion. The Indians are tawny, and features coarse. The Tartars, Chinese, and Indians pull their beard up by the root.

Q. In what does the trade of these nations consist?

A. In the parts of Tartary are fables, martins, furs, iron, rhubarb, musk, &c. In other parts, silk, cotton, carpets, tapestry, mohair, cinnamon, aloes, myrrh, camphire, manna, spices, nutmegs, coffee, tea, drugs, gold-dust, quicksilver, diamonds, porcelain, and lacker and japan ware.

Q. What are the islands of Asia?

A. They are innumerable. The principal one in size (being larger than all Europe) is New Holland, surrounded by the Indian and Pacific Ocean : the others of the most note are Borneo, Celebes, Sumatra, Java, Ceylon, in the Indian Ocean ; Nippon, New Guinea, Formosa, Luconia, Mindanao, in the Pacific Ocean ; and Cyprus, in the Levant or Mediterranean Sea.

Q. Are there any remarkable mountains in this quarter ?

A. The chief are Ararat, near the Caspian Sea, where the ark rested after the flood : Horeb and Sinai, in Arabia ; Libanus, in Palestine ; Imaus, in Tartary ; Caucasus, between the Black Sea and the Caspian ; and Taurus, running from east to west of all Asia.

Q. What are its rivers ?

A. The principal are, the Tigris and Euphrates, between Arabia and Persia ; Tobol and Oby, in Tartary ; Ganges and Indus, in India ; and the Hoambo and Tay, in China.

On the north of China runs a vast brick wall, supposed to extend 1500 miles in length, is from 20 to 25 feet high, and broad enough for six horsemen to travel abreast with ease : it was built before the christian epoch commenced, and at this time is little decayed.

Of Africa.

Q. How is Africa bounded ?

A. On the north by the Mediterranean, which separates it from Europe ; on the east by the Isthmus of Suez, the Red Sea, and the Indian Ocean, which divide it from Asia ; and on the west by the Atlantic Ocean, which separates it from America : so that it has only three sides, bearing some resemblance to the form of a pyramid, the base being the northern part, and the apex or top the Cape of Good Hope. It is entirely surrounded by water, except the above isthmus, about 120 miles over, between the Mediterranean and Red Sea. Its utmost length from north to south is 4300 miles, and the broadest part 3500.

Q. What are the countries of Africa ?

A. This quarter, except along the coasts, is imperfectly known to the Europeans, but according to the best accounts and conjectures, it may be divided as under.

<i>Countries.</i>		<i>Chief Towns.</i>
	Morocco	Mequinez
Barbary.	Algiers	Algiers
	Tunis	Tunis
	Tripoli	Tripoli
	Barca	No town
	Egypt	Cairo

Biledulgerid	Dara
Zahara	Tegeffa
Nigritia	Madinga
Bornou	Bornou
Cashna	Cashna
Fezzan	Mourzook
Nubia	Sennar
Abyssinia	Gondar
Abex	Suaquam
Adel	Zeila
Guinea, Upper	Benin
Loango	Loango
Lower Guinea, {	St. Salvador
	Loanda
	Benguela
Mataman	No town
Monomugi	Chicova
Zanguebar	Melinda
Monomotapa	Monomotapa
Sofala	Sofala
Caffraria	No town
Hottentot	Cape Town

In Egypt, Biledulgerid, Zahara, and Abyssinia, the people are of a tawny complexion; but in all other parts they are quite black, have flat noses, thick lips, and hair like wool.

Q. What are the commodities of Africa?

A. In Barbary, Egypt, and Nubia, are rice, figs,

raisins, oranges, lemons, citrons, almonds, pomegranates, olives, fenna, leather, civit, sugar, and indigo. In Nigritia and Guinea, ostriches feathers, gold-dust, elephants teeth, and pepper. In the south, along the coast, ambergrise, frankincense, musk, millet, pearls, gold, silver, &c. But the persons of the natives make the most considerable article in the traffic on the Guinea or western coast, where the Europeans purchase them like so many cattle, carry them to America, and there sell them for slaves.

Q. What are the islands of this quarter ?

A. The only considerable one in size is Madagascar, in the Indian Ocean ; the others are all small, and those of most note are St. Helena, Ascension, St. Jago, St. Vincent, Mayo, Canary, Teneriff, Ferro, Madeira, in the Atlantic Ocean.

Q. Are there any mountains of note ?

A. The principal are, Sierra Leone, or Lion Mountains, between Nigritia and Guinea ; Atlas, between Barbary and Biledulgerid ; the mountains of the Moon, between Abyssinia and Monopotapa ; and the Pike of Teneriff.

Q. What are its rivers ?

A. They are numerous : the most noted are the Nile, in Nubia and Egypt ; and the Niger, running through all Nigritia, of which the Gambia and Senegal are branches.

The Pyramids of Egypt, near Cairo are the

most stupendous structures that ever were raised by the hands of men: the basis of the largest covers eleven acres of ground, and its perpendicular height is 500 feet, but if measured obliquely, 700 feet. Their antiquity is beyond the researches of history, and their original uses still unknown.

Of America.

Q. How is America bounded?

A. On the north by unknown parts, on the east by the Atlantic Ocean, and on the south and west by the South Sea or Pacific Ocean; extending about 9000 miles in length, and in its greatest breadth 3700. Nature seems to have divided it into two continents, North and South, by a neck of land, called the Isthmus of Darien, or Panama, which is not more than 60 miles broad. And in a great gulf, formed by this isthmus and the northern and southern continents, lie a multitude of islands denominated the West Indies; in contradistinction to the islands of Asia, beyond the Cape of Good Hope, which are called the East Indies.

Q. In what manner is this extensive country divided?

A. Those vast regions to the north, west, and southwest of Hudson's Bay, are very little known; the other parts are divided as follow.

North America.

<i>Countries.</i>	<i>Chief Towns.</i>
New Britain	Not known
Canada	Quebec
New Brunswick	St. John
New Scotland	Halifax
United States *	Washington
East Florida	St. Augustin
West Florida	Pensacola
Louisiana	New Orleans
New Mexico	Santa Fé
New Albion	Not known
California	St. Juan
Mexico	Mexico

South America.

Terra Firma	Panama
New Granada	Santa Fé de Bogota
Guiana	Paramaribo
Amazonia	Not known
Peru	Lima
Brazil	St. Salvador
Paraguay	Assumption
Chili	St. Jago
Patagonia	Not known

* These are Massachusetts, New Hampshire, Rhode Island, Connecticut; New York, New Jersey, Pennsylvania, Delaware; Maryland, Virginia, North Carolina, South Carolina; Georgia, Vermont, Kentucky, and Tennessee: their chief towns are Boston, Portsmouth, Newport, Newhaven; New York, Trenton, Philadelphia, Dover; Anapolis, Richmond, Newburn, Columbia; Augusta, Bennington, Lexington, and Knoxville.

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The original natives of this country are generally of a good size, well made, and of a brown or copper complexion; but in Paragua, and further southward, tolerably fair: they pull their beards up by the roots, go for the most part naked, and paint themselves of various colours.

Q. What are the commodities of these countries.

A. North America produces cotton, silk, skins, furs, feathers, cochineal, logwood, mahogany, tobacco, iron, sugar, and several sorts of drugs. South America, gold, silver, pearls, emeralds, jaspers, amethysts, ebony, Brasil wood, Peruvian bark, amber, resin, balsam, feathers, &c.

Q. What islands belong to America?

A. They are innumerable; but the principal ones lie in the Atlantic Ocean. In the north the most noted are Newfoundland, Cape Breton, St. John; between the two continents, Cuba, Hispaniola, Jamaica, Porto Rico, Margareta, Curacas, Martinico, Guadaloupe; and in the south, Trinidad, Falkland, and Tierra del Fuego.

Q. Is America remarkable for mountains?

A. Though in general not deemed a mountainous country, it has the loftiest mountains in the world. In South America, the Andees, or Cordilleras, run along the coast of the Pacific Ocean 4300 miles in length; and the summit of one of them, Cotopaxi, is found to be 6252 yards above

the level of the sea. In North America, are the Allegany or Appalachian mountains, between the Atlantic and the Mississippi, extending 900 miles in length; with many others toward the pole.

Q. What are its principal rivers?

A. In North America, the Mississippi is the greatest, of which the Illinois and Ohio are branches; the others are the St. Lawrence, Hudson, Delaware, Susquehannah, and Potomac. In South America, the Amazon, Plata, and Orinoko; the first two being the largest rivers in the world.

Beside the above and many other large rivers, the inland parts abound with extensive lakes. In North America there are five which communicate with one another, and run into the river St. Lawrence: the smallest is not less than 600 miles in circumference, and the greatest, which includes several large islands, is 1500 miles round; and all of them are navigable by any vessels.

CHRONOLOGY.

Q. What is understood by chronology?

A. The science of computing time, distinguishing its parts, and adjusting events to their proper periods.

Q. What are the parts of time?

Q. Years, months, weeks, days, hours, minutes, seconds, &c. and by these the larger periods

of time, as epochs, ages, lustrums, olympiads, indictions, and cycles, are estimated and measured.

Q. What is an epoch?

A. The time at which a new computation is begun, and from which dates are numbered by historians: as, the creation of the world, the building of Rome, the birth of Christ, &c. It also frequently remarks the account of time from one remarkable event to another; but this is more properly called an *era*.

Q. What is an age?

A. An age, or century, is a secular period, or a space of time including one hundred years.

Q. What is a lustrum?

A. A space of five years; used chiefly by the Roman poets.

Q. What is an olympiad?

A. A space of four years; by which the ancient Greeks reckoned their time since the institution of the olympic games, in a plain near the town of Olympias, which they celebrated at the beginning of every fifth year. They were instituted by Hercules, in honour of Jupiter, 774 years before Christ.

Q. What is an indiction?

A. A revolution of fifteen years; used by the Romans, for indicating the time of certain payments made by the people to the republic.

Q. What is a cycle?

A. A periodical space of time in which the same revolutions begin again; as those of the Sun and Moon. The cycle of the Sun is a period of 28 years, which being elapsed, the days of the month return again to the same days of the week. The cycle of the moon is a period of 19 years, in which time the new and full moons return again to the same days of the year.

Q. Of what use are these cycles?

A. By the revolution of the solar cycle, the Dominical or Sunday Letter is found; and the year of the lunar cycle, is called the Prime or Golden Number: and from both of them the time of celebrating Easter is determined; as may be seen in the tables prefixed to the Book of Common Prayer.

ARCHITECTURE.

Q. What is architecture?

A. The art of building or erecting edifices: it is of three kinds; civil, military, and naval.

Q. In what does civil architecture consist?

A. In designing and building edifices of every kind for the uses of civil life; as churches, colleges, halls, palaces, &c. These are erected agreeably to some of the orders of this art; and are also distinguished, with regard to their several states into the antique, Saxon, Gothic, modern, &c.

Q. What are the orders of civil architecture?

A. They are five; the Tuscan, Doric, Ionic, Corinthian, and Composite. They take their names from the people who invented them, except the Composite, which is so called from being composed out of the other orders, and was invented by the Romans.

Q. What is military architecture?

A. The art of strengthening and fortifying towns and places, to screen them from the insults of enemies, and the violence of arms; as the erecting of forts, castles, and other fortresses, with ramparts, bastions, &c. This art is more usually called *fortification*.

Q. In what consists naval architecture?

A. In teaching the construction of ships, gallies, and other floating vessels for the water; and of ports, moles, docks, &c. on the shore; whether for service of war or commerce.

PAINTING.

Q. What is painting?

A. The art of representing all manner of objects by lines and colours, on an even and uniform surface.

Q. How is this art divided?

A. Into six parts: the design, the proportion, the expression, the clair-obscur, the ordonnance, and the colouring.

Design, is the simple contour, or outlines, of the figures, or things intended to be represented; or the lines that terminate and circumscribe them.

Proportion, is the just magnitude of the several members of a figure, a groupe, &c. with regard to one another, to the whole figure, the groupe, and the entire piece.

Expression, denotes a natural and lively representation of the subject, or of the several objects intended to be shown.

Clair-obscur, is the art of distributing to advantage the lights and shadows of a piece, both with regard to easing the eye, and heightening the effect of the whole composition.

Ordonnance, denotes the disposition of the parts of a picture, either with regard to the whole piece, or the several parts.

Colouring, is the manner of applying, and conducting the colour of a picture; or the mixture of lights and shadows, formed by the various colours, employed in a painting.

Q. What are the various kinds of painting?

A. They are distinguished, with regard to the materials used; the matter whereon they are applied; and the manner of applying them: from which the principal kinds of painting are as follow:

Oil, or *oilcolours*, simply called *painting*, consists in grinding the colours with nut or linseed oil: an invention of the utmost advantage to the art;

since, by this means, the colours of a picture are preserved much longer, and receive a lustre which the ancients could never attain to, whatever varnish they made use of to cover their pieces.

Watercolours, or *limning*, has the colours mixed with water only; or sometimes a little size added; and is a more ancient art than painting in oil-colours.

Fresco, is a kind of painting with watercolours on fresh plaster, or on a wall laid with mortar not yet dry; so that incorporating with the mortar, and drying along with it, the colours become extremely durable.

Distemper, is a term for paintings that have the colours mixed with size, whites of eggs, or any such proper glutinous or unctuous substance, and not with oil.

Miniature, is a delicate kind of painting, consisting of little points or dots, instead of lines, and done with thin watercolours.

Encaustic, is a species of painting with burnt wax: it consists in applying watercolours upon a coating of bees-wax, and when the picture is dry, it is put near a fire, by which the wax melts, and absorbs all the colours.

Enamel, is a method of painting with enamels, or metalline colours, ground and reduced to powder, and used like other colours with a pencil;

then fused, baked again, and vitrified by force of fire.

Glass, is a kind of painting somewhat similar to enamel; the colours being incorporated with the glass itself, by exposing them to a proper degree of fire.

SCULPTURE.

Q. What is sculpture?

A. The art of cutting or carving wood and stone into images; as also of fashioning wax, earth, plaster, &c. to serve as models, or moulds, for the casting of metalline figures.

Q. Is not this a very ancient art?

A. Its antiquity is past doubt, as the sacred writings mention it in several places; witness Laban's idols taken away by Rachel, the brazen serpent, the golden calf, &c.

It is probable that sculpture is more ancient than painting; and from the style of ancient painting there is reason to conclude, that sculpture stood first in the public esteem: for the ancient painters have evidently imitated the statuaries; since their works have not that freedom of style, especially with respect to their drapery, which the pencil might easily acquire to a greater degree than the chissel.

Q. Which is the most difficult of these two arts ?

A. Painting has the greatest number of requisites, but at the same time its expedients are the most numerous ; and therefore we may venture to affirm, that, whenever sculpture pleases equally with a painting, the sculptor is certainly the greatest artist.

Q. What are deemed the best specimens of sculpture in England ?

A. The statues of Phrensy and Melancholy on the piers before Bethlehem hospital, deserve to be ranked among the first performances in this art : they were executed by Cibber. There is an elegant statue of Edward VI, in bronze, at St. Thomas' hospital, in Southwark, by Sckeemaker ; and another of sir Isaac Newton, at Cambridge, by Roubiliac. Westminster-abbey is a famous repository of sculpture ; but the figures lose much of their effect, by being crouded together, without any orderly arrangement : the monuments of the duke of Argyle and Mrs. Nightingale, both by Roubiliac, and one of Dr. Chamberlain, by Sckeemaker, seem to stand highest in the public opinion.

MYTHOLOGY.

Q. WHAT is mythology?

A. The history and explication of the fabulous gods and heroes of the heathen world.

Q. Whence is the word mythology derived?

A. From a Greek word [*muthologia*] signifying a discourse or description of fables.

Q. Of what use is a knowledge of these fables?

A. To understand the writings of the poets, and to explain the historical and fabulous representations introduced in pictures.

Q. How are the heathen gods divided?

A. Into six classes; the celestial, terrestrial, marine, infernal, subordinate, and demi-gods.

Of the Celestial Deities.

Q. Who are the celestial deities?

A. The gods of this class are Jupiter, Apollo, Mercury, Bacchus, and Mars; and the goddesses, Juno, Minerva, and Venus.

Q. Who was Jupiter?

A. The sovereign god of the heathens*; the

* The heathens in general believed that there was but one supreme God; but when they considered this one great being as influencing the affairs of the world, they gave him as many different names;

son of Saturn and Ops, born in Crete at the same birth with Juno. He married his sister Juno, expelled his father out of his kingdom, and divided it with his brethren. Under several shapes he is said to have played many wanton pranks ; so that according to poetic fiction, he filled heaven with his natural children.

Q. How was the sovereign authority divided among the sons of Saturn ?

A. Jupiter, as the eldest, had the heavens, Neptune the waters, and Pluto the infernal regions.

Q. Had Jupiter any children by Juno ?

A. He had two sons, Vulcan and Mars, and a daughter named *Hebe*, who, for her extraordinary beauty, he made goddess of youth ; she was likewise his cupbearer, and poured out the nectar,

and hence proceeded their variety of nominal gods. When he thundered or lightened, they called him Jupiter ; when he calmed the sea, Neptune ; when he guided their councils, Minerva ; and when he gave them strength in battle, Mars. In process of time they used different representations of this Jupiter, Neptune, &c. and considered them, vulgarly at least, as so many different persons. They afterward regarded each of them in different views, according as they showered down blessings or inflicted punishments. There was also one Jupiter for Europe, and another for Africa ; and in Europe there was one great Jupiter who was the particular friend of the Athenians, and another who was the special protector of the Romans ; nay, there was scarce a town in Italy that had not a Jupiter of its own. In this way Jupiter at length had temples and different characters almost every where.

the drink of the gods, which they also called ambrosia.

Q. How is Jupiter represented?

A. He is generally painted as sitting, with the fulmen or thunder, or rather lightning, in one hand, and a sceptre with an eagle in the other; sometimes an eagle is placed at his feet, that bird having the title of his armourbearer: when represented in a chariot, he is drawn by four horses.

Q. Who were the parents of *Apollo*?

A. Jupiter and Latona: he was born in the island Delos, at the same birth with Diana.

Q. What advanced *Apollo* among the gods?

A. The invention of physick, music, poetry, and rhetoric, which are ascribed to him; and therefore he is said to preside over the Muses. He had a famous temple at Delphos, where his oracles were in great estimation.

Q. In what manner is *Apollo* distinguished?

A. By the beauty of his face, and the gracefulness of his figure; with a laurel crown on his head, a bow and arrows in one hand, and a harp in the other.

Q. Does not *Apollo* sometimes mean the Sun?

A. Yes; beside his former deifications he is also the god of light, and then is generally called *Phœbus*.

Q. Who was *Mercury*?

A. The son of Jupiter and Maia, god of elo-

quence and commerce, and the patron of thieves : he was the messenger of the gods, and conducted souls to their proper place, after their parting from the body.

Q. How is he represented ?

A. As a youth of extreme lightness and agility : but the most remarkable of his distinguishing attributes are his petasus, or winged cap ; his talaria, or winged shoes ; and his caduceus, or wand, with wings at the top, and bound by two serpents.

Q. What do you say of *Bacchus* ?

A. He was the son of Jupiter and Semele, and the god of wine : he is represented as a jolly beardless youth, crowned with ivy and vine leaves ; a spear wrapped with the same, in one hand ; and with grapes, or a cup, in the other. He is usually attended by Silenus and a drunken band of satyrs, nymphs, &c. and when carried in a chariot, is drawn by lions and tigers, or by lynxes and panthers.

Q. Who was *Mars* ?

A. The son of Jupiter and Juno, or, as Ovid tells the story, of Juno alone ; she being displeased that Jupiter should have a daughter, Minerva, without female aid : being therefore a son of discontent, he was made the god of war and strife.

Q. How is he distinguished ?

A. He is painted with a fierce and froward aspect ; terror every where in his looks, clothed in armour, a helmet on his head, and a spear in his

hand. When in a chariot he is drawn by two horses, which are driven by his sister *Bellona*, the goddess of war, who is represented as a distracted woman.

Q. What are the distinguishing characters of *Juno*, the sister and wife of Jupiter?

A. Being queen of the gods, and goddess of the air, she is beautiful, and full of majesty; has a sceptre in her hand, a crown of roses and lilies on her head, and her chariot drawn by peacocks. She is attended by *Iris*, her messenger to promote strife and contention, who, on account of her swiftness, is represented with wings, and riding on a rainbow.

Q. Whence did *Minerva* proceed?

A. She came forth from the brain of her father Jupiter, completely armed; and is the only one of his offspring to whom pertain the prerogatives of the supreme rank of divinity. She is the goddess of wisdom and the arts, and the inventress and president of war.

Q. How is she represented by the poets and painters?

A. *Minerva*, or *Pallas*, is distinguished by the dignity of her face, and a sternness bordering on masculine; a helmet with a plumed crest on her head, a spear in her right hand, and in the other a shield, with the head of *Medusa* upon it; the same figure appears also on her breastplate: she is gene-

rally accompanied by a cock and an owl, as emblems of fighting and wisdom.

Q. Who was *Venus*?

A. The handsomest of all the goddesses: she sprung from the froth of the sea, was educated by the Hours, and afterward carried by them into heaven, where the gods found her so extremely beautiful, that they were desirous of marrying her, and named her the goddess of love; but at last she was married to Vulcan, the most ugly and deformed of all the gods.

Q. In what manner is *Venus* described?

A. The poets, painters, and statuaries represent her in a variety of alluring forms: with her hair waving over her naked shoulders, or negligently tied behind in golden tresses; with a mantle, exhibiting all the colours of the rainbow and glittering with diamonds, sometimes flowing loosely, and at other times bound with a girdle, called cestus; sometimes she is exhibited like a young virgin rising from the sea, and riding in a shell; sometimes with a shell in her hand, and her head crowned with roses; with a mirror in her hand, and golden sandals on her feet; with poppy in one hand, and an apple in the other. She is accompanied by Cupid and the Graces, and followed by the beautiful Adonis, who holds up her train. When riding in her chariot, which is of ivory carved and gilt, she is drawn by swans, doves, or swallows.

Q. How is *Cupid* represented?

A. This god of love appears as a naked boy, with wings; and with a quiver, bow, and darts, or a torch: though he is the youngest of all the gods, yet his power is deemed the strongest.

Q. Who are the *Graces*?

A. Three sisters, named Aglaia, Thalia, and Euphrosyne: they are generally represented naked, very beautiful, and their hands connected together.

Of the Terrestrial Deities.

Q. Who are the terrestrial deities?

A. The most celebrated are Saturn, Vulcan, Æolus, and Momus; Vesta, Cybele, Ceres, and the Muses; there are also others of note, which reside in the woods, and are properly called *gods of the woods*.

Q. Who was *Saturn*?

A. Saturn, the father of the gods, was the son of Uranus and Vesta, or Coelum and Terra: his brothers were Titan, Oceanus, and divers others: his sisters were Ceres, and Cybele (otherwise Ops, or Rhea) whom he afterward married. Being dethroned by his son Jupiter, he took refuge in Italy, where he civilized the people and introduced several parts of agriculture.

Q. How is he represented?

A. Under the figure of a decrepid old man, with a long beard, and hoary head; bearing in one hand

a pruning hook, or sithe, and in the other a child, which he is about to devour; sometimes he is furnished with wings, and an hourglass: Saturn and Time being the same, he is thus represented to denote the swiftness of time, and that it destroys every thing.

Q. What do you say of *Vulcan*?

A. He was the son of Jupiter and Juno, and the husband of Venus, as mentioned before. On account of his deformity, he was cast down from heaven, fell on the island Lemnos, and broke his leg; there he set up the trade of a smith, manufactured Jupiter's thunder and the arms of the other gods, and taught the manifold uses of fire and iron. He is therefore represented lame and deformed, as blackened and hardened from the forge, and with a face red and fiery: sometimes he is attended by the Cyclops, his servants and workmen, who have only one eye, which is placed in the middle of their foreheads. This poor god is always the subject of pity or ridicule: he is the grand cuckold of heaven; and the great celestial deities seem to have admitted him among them to make them sport.

Q. What is the province of *Æolus*?

A. He is god of the winds; painted with swollen cheeks, like one who endeavours to blow a blast forcibly; also with wings on his shoulders, and a high coloured fiery countenance.

Q. Is not *Momus* the god of folly?

A. Yes; his name signifies a jester, mocker, or mimic, and that is his employment; for when he finds the gods doing amiss, or neglecting their duty, he censures, mocks, and derides them with the greatest freedom. He is represented with a mask and grotesque face.

Q. Who was *Vesta*?

A. *Vesta*, or *Terra*, the wife of *Coelum*, and mother of *Saturn*, is the oldest of the goddesses: she is represented sitting, and with a drum, because the Earth is immoveable, and contains the boisterous winds in its bosom; she has a crown on her head formed of divers colours, and several animals creeping about and fawning upon her.

There was another *Vesta*, the daughter of *Saturn*, and a virgin goddess: she is the same with *Ignis*, or *Fire*, and her power was exercised about altars and houses.

Q. How is *Cybele*, the wife of *Saturn*, and mother of the gods, represented?

A. Being goddess of all things which the earth sustains, she is seated in a chariot drawn by lions, her garments of various colours, and figured with the images of divers creatures, a key in her hand, and a crown of towers on her head.

Q. What is the office of her sister *Ceres*?

A. She is the goddess of corn and tillage; represented tall and majestic, with swelling breasts,

and yellow hair ; on her head a turband composed of the ears of corn, in one hand poppies and ears of corn, and in the other a lighted torch.

Q. Who are the *Muses* ?

A. Nine beautiful virgins, the daughters of Jupiter and the nymph Mnemosyne, or Memory : they are mistresses of the sciences, and governors of the festivals of the gods.

Q. What are their names, and the sciences over which they preside ?

A. *Calliope* is the goddess of rhetoric ; *Clio*, of history ; *Erato*, of poetry ; *Thalia*, of comedy ; *Melpomene*, of tragedy ; *Terpsichore*, of dance ; *Euterpe*, of music ; *Polyhymnia*, of song ; and *Urania*, of astronomy.

Q. Please to describe the *gods of the woods* ?

A. The principal of these deities, and the manner in which they are represented, are as follow :

Pan, the god of shepherds and hunters, has a smiling ruddy face, a long beard, and two horns on his head : his skin is spotted, his thighs and legs covered with long hair, and he has the tail and feet of a goat ; in one hand he holds a crooked staff, and in the other a pipe of uneven reeds.

Sylvanus, who presides over the woods, is an old man of little stature, with the tail and feet of a goat, holding a branch of cypress in his hand.

Silenus, so called from his jocular temper, was the tutor of Bacchus and his perpetual companion ;

he is represented as an old man, with a bald head, a flat nose, large ears, gorbellied, a tail, and cloven feet: he is generally drunk, and mounted on an ass; but when walking he is supported by a staff.

The *Satyrs*, and *Fauns*, are attendants on Pan; they are horned, and have the tail and legs of a goat.

Diana, the goddess of the woods, was twin sister to Apollo; and as he is sometimes called Sol, or the Sun, she is often called Luna, or the Moon. Her delight is in hunting; accordingly she is described as running, with a short vest girt about her; yet flying back with the wind: she is tall of stature; her face very handsome, yet somewhat manly; and her legs are bare, well-shaped, and strong: her attributes are a javelin, or a bow, quiver and arrows.

Flora, the goddess of flowers, is represented young and graceful, holding in her right hand the blossom of beans and peas, and adorned with various flowers.

Pomona, the goddess of fruit, is an amiable nymph; and her attributes a basket of fruit, a number of apples in her left hand, and in her right a nosegay of flowers.

The *Nymphs*, are young and beautiful virgins, who attend on the superior celestial, terrestrial, and marine deities. Those of the air are called *Auræ*;

of the woods, *Dryades*; of the mountains, *Oreades*; of the sea, *Nereides*; and of the rivers, or fountains, *Naiades*.

Cf the Marine Deities.

Q. How is *Neptune*, the god of the sea, described?

A. He is commonly represented standing, majestic and serene, with a trident in his right hand, a dolphin on his left, and treading on the back of a ship. When passing over the calm surface of the waters, he is in his chariot, which is a large scallop-shell, drawn by sea horses or dolphins, accompanied by his queen and numerous attendants.

Q. Who did he marry?

A. *Amphitrite*, the daughter of *Nereus* and *Doris*, parents of the *Nereides*.

Q. Who are his attendants?

A. *Triton*, the *Sirens*, and the *Nereides*.

Q. Who was *Triton*?

A. The son of *Neptune* and *Amphitrite*, and trumpeter to his father: he is represented as half man, half fish, terminating in a dolphin's tail, and bearing in one hand a wreathed seashell, which serves him for a trumpet. Some poets have imagined several *Tritons*, and they are introduced not only as trumpeters in *Neptune's* retinue, but also as drawing his chariot.

Q. Please to describe the *Sirens*?

A. They are supposed to have been the three daughters of Achelous and Melpomene, and are called Parthenope, Lygea, and Leucosia; the ancients describe them with the faces of women, and the bodies of birds; but the moderns represent them as beautiful women from the head to the middle, and downward by that of a fish covered with scales. They are said to reside on rocks where vessels are in danger of splitting; and alluring voyagers by the sweetness of their melody, they put them to death. The Tritons and Sirens, are sometimes called *mermen* and *mermaids*.

Q. How are the *Nereides* represented?

A. These sea nymphs compose the train of Amphitrite, and much resemble the modern Sirens in their figure.

Of the Infernal Deities.

Q. In what manner is *Pluto*, god of the infernal regions, described by the poets and painters?

A. He is represented extremely black and ugly, with a key, or a sceptre of two points, in his hand, and a crown of ebony on his head; sometimes he is crowned with cypress leaves, or the flowers of narcissus, because he stole away Proserpine when she was gathering that flower. When riding in his chariot, he is drawn by black horses.

Q. Who was *Proserpine*?

A. The daughter of Jupiter and Ceres, stolen

by Pluto out of Sicily, and carried to his subterranean dominion, where she was the partner of his empire.

Pluto
Q. How is ~~Neptune~~ attended?

A. By the Fates, the Furies, and the Judges; by Harpies, Gorgons, and other monsters; also by Charon, and the dog Cerberus.

Q. Who are the *Fates*?

A. They are three sisters, represented elderly, and clothed in white, bordered with purple: their names are Clotho, Lachesis, and Atropos. To them is intrusted the management of the fatal thread of life; Clotho draws the thread, Lachesis turns the wheel, and Atropos cuts the thread spun.

Q. Please to describe the *Furies*?

A. The principal of these are three sisters, called Alecto, Tisiphone, and Megæra: they are represented old and meagre, with pale cheeks, inflamed eyes, snakes on their heads instead of hair, and whips or burning torches in their hands. Their office is to punish wicked men for their crimes, and to torment the consciences of secret offenders.

Q. Who are the *Judges*?

A. Minos, Rhadamanthus, and Æacus, sons of Jupiter: Minos holds a golden sceptre, and oversees the judgement of the other two, who each hold a staff in their hand. When the souls of the dead have passed their tribunal, they are conveyed either to Elysium or Tartarus, the former a place

abounding with pleasures and delights for the good, and the other a hideous dungeon for the wicked.

Q. Who are the *Harpies*?

A. Rapacious monsters, with the faces of women, the ears of bears, and the bodies of vultures. There were three of them, all sisters, their names Aello, Ocypete, and Celeno.

Q. Describe the *Gorgons*?

A. These were also three sisters, and are described with wings on their shoulders, serpents round their heads, and their teeth of a prodigious size. Their names were Stheno, Euryale, and Medusa; the latter of whom was mortal, and killed by Perseus.

Q. Who was *Charon*?

A. A decrepid old man with a long beard, yet of youthful vigour, and dirty in person and attire: his employment was to ferry souls over the rivers at the entrance of hell.

Q. What were those rivers?

A. Four: *Acheron*, whose waters are extremely bitter; *Styx*, by which the gods were used to swear; *Cocytus*, flowing out of *Styx*, with a horrible groaning noise; and *Phlegethon*, swelling with waves of fire. Beside these rivers at the entrance, there is another in Elysium, named *Lethe*, from the forgetfulness it causes; for those who drink of its water, immediately forget all past transactions.

Q. Is there any thing remarkable of the dog *Cerberus* ?

A. He had three heads, and his body covered with snakes instead of hair : he was stationed at the gates of Pluto's palace ; and is sometimes called the *porter of hell*.

Q. What other deities are there in the infernal regions ?

A. Old *Erebus* and his wife *Nox*, who preside over darkness and night ; *Mors*, who presides over death ; and *Somnus*, over sleep : the last by his servant *Morpheus*, sends dreams to people in this world while sleeping. *Plutus*, the god of riches, is generally deemed an infernal deity ; for riches come out of the earth, and are the root of all evil.

Of the Subordinate Deities.

Q. Who are deemed subordinate deities ?

A. Those gods and goddesses who preside over kingdoms, provinces, cities, towns, streets, houses, &c. and that preside over infants, children, young people, and adult persons. Their number is infinite, there being almost as many gods as there are things.

Of the Demi-Gods.

Q. What do you say of the demi-gods ?

A. The demi-gods and heroes, were those who had human bodies, sacred minds, and celestial

souls. The principal of these are Hercules, Jason, Theseus, Castor and Pollux, Perseus, Æsculapius, Prometheus, Atlas, Orpheus, Achilles, Ulysses, Orion, Osiris.

Beside the gods and goddesses belonging to the several classes already mentioned, many of the virtues and vices had their peculiar deities.

HISTORY.

Q. WHAT is history?

A. A recital or description of things as they are, or have been, in a continued orderly narration of their principal facts and circumstances.

Q. Whence is the word derived?

A. From a Greek word [*istoria*] which literally denotes a search of curious things, or a desire of knowledge, or even a rehearsal of things that have been seen.

Q. How is history divided?

A. History has various divisions in regard to its time, its matter, and its form.

Q. What are the divisions as to time?

A. With respect to time, history is divided into *ancient* and *modern*, distinguished into several epochs, periods, and intervals. Ancient history includes an account of all things from the creation of the world to the birth of Christ; and modern

history, from the birth of Christ to the present time.

Q. Into what periods has history been divided ?

A. It is distinguished into three ages : the first, from the creation to the deluge, which is reckoned the *obscure* or *uncertain age*, because we know no more than the short account given of it in the holy scriptures ; the second, from the deluge to the first olympiad, which, from the many feigned stories related in it, is deemed the *heroic* or *fabulous age* ; the third, from the first olympiad to our own times, is called the *historical age*, because the actions done in that period are recorded by writers of true history.

Q. How is history divided with regard to its matter ?

A. Into *sacred*, *natural*, *civil*, *personal*, and *singular* : to which may be added *artificial history*, giving an account of the origin and progress of arts ; and *miscellaneous history*, which recites various things as they promiscuously occur in human life.

Q. What is sacred history ?

A. It is that which lays before us the mysteries and ceremonies of religion, visions, miracles, and other supernatural things, of which God alone is the author. Such are the book of Genesis, the Gospels, Apocalypse, &c. Sacred history, since the destruction of Jerusalem, or the 70th year after the birth of Christ, is more properly called *ecclesi-*

ecclesiastical history; which denotes a narration of the transactions, revolutions, and events, that relate to the state of the christian church from its commencement to the present time. Histories on other subjects has the general name of *profane history*.

Q. What is meant by natural history?

A. A description of the singularities and alterations of natural bodies; whether terrestrial, as animals, vegetables, fossils, fire, water, &c. or celestial, as the stars, planets, comets, &c. It is much the same with what is otherwise called *physiology*.

Q. In what does civil history consist?

A. In a narration of facts relating to people, states, republics, communities, cities, &c. and may be divided into *particular* and *general*: the former consists of a number of facts relating to the same state, suitably connected and laid together in a proper series; the latter is made of several particular histories, whose separate transactions within the same period should be so distinctly related as to cause no confusion. Civil history, in its more unlimited extent, is denominated *universal history*.

Q. To what subject is personal history applied?

A. To a narrative which gives the portrait or life of some particular person. It is the same with what is otherwise called *biography*, and may be denominated *literary history*, as it records the lives

and productions of learned men, the controversies that subsisted among them, and the rise and advancement of sciences.

Q. What is singular history?

A. It is that which describes a single action, siege, battle, or even a war or expedition, &c.

Q. How is history divided as to its form?

A. Into *simple*, *figurative*, and *mixed*. The *simple*, is that delivered without any art or foreign ornament; being only a naked and faithful recital of things, just in the manner and order wherein they passed: the *figurative*, is that which is further enriched with ornaments, by the wit, ingenuity, and address of the historian: the *mixed*, is that which, beside the ornaments of figured history, calls in the proofs and authorities of simple history, furnishing authentic memoirs, letters, &c. to vouch the truth of what is related.

SOVEREIGNS OF ENGLAND.

Before the Romans came into this island, the Britons, who then possessed the country, were divided into several nations, each of them governed by its own king. And when Britain became a member of the Roman empire, many of their tribes had their proper kings, who were suffered to govern by their own laws, provided they were

tributary. After the Romans had quitted Britain, upon the irruption of the Goths into Italy in the 5th century, the kingly government returned to the Britons; who chose for their king, Constantine, brother of Aldroinus, king of Bretagne in France, a prince of the British blood; to whom succeeded Constantine his son; then Vortiger, who usurped the crown, and, to maintain his usurpation, first called in the Saxons, at that time hovering along the coast of Britain. The Saxons having got footing in the island, never left the Britons quiet till they were possessed of the whole: though they were overthrown in many battles by king Vortimer, the son and successor of Vortiger, and afterward by king Arthur; yet the Britons were soon after his death so broken and weakened, that they were forced at last to retreat, and exchange the rich part of Britain for the mountains of Wales. Thus the Britons left the stage, and the Saxons entered. By these the country was divided into seven kingdoms, called the Saxon Heptarchy, which continued for several ages, till the prevailing fortune of the West Saxons united them all into one, by the name of England.

EGBERT, 17th king of the West Saxons, and 19th monarch of Britain, was crowned at Winchester, in the year 819, first king of England; died 836; and was succeeded by his son,

ETHELWOLF, died 857, and was succeeded by his son,

ETHELBALD, died 860, and was succeeded by his brother,

ETHELBERT, died 866, and was succeeded by his brother,

ETHELRED I, received a wound in battle of which he died 872, and was succeeded by his brother,

ALFRED, died 901, and was succeeded by his son,

EDWARD the Elder, died 924, and was succeeded by his son,

ATHELSTAN, died 940, and was succeeded by his brother,

EDMUND I, received a wound, in endeavouring to part two of his servants, of which he bled to death 946, and was succeeded by his brother,

EDRED, died 955, and was succeeded by his nephew,

EDWY, eldest son of Edmund I, died of grief 959, and was succeeded by his brother,

EDGAR, died 973, and was succeeded by his eldest son,

EDWARD the Martyr, stabbed by order of his mother-in-law 979, and was succeeded by his half-brother,

ETHELRED II, died 1016, and was succeeded by his son,

EDMUND II, murdered 1017, and was succeeded by,

CANUTE the Dane, descended from a daughter

of Edward the Elder, died 1036, and was succeeded by his son,

HAROLD I, died 1039, and was succeeded by his brother,

HARDICANUTE, died 1041, and was succeeded by,

EDWARD the Confessor, son of Ethelred II, died Jan. 1066, and was succeeded by,

HAROLD II, son of the earl of Kent, slain in battle October 14, 1066; and was succeeded by,

WILLIAM I, duke of Normandy, a descendant from Canute, born 1027; made a claim of the crown of England, and landed in Suffex, Sept. 29, 1066; defeated the English troops at Hastings, Oct. 14 following, when Harold was slain, and William assumed the title of Conqueror; crowned at Westminster, Dec. 25, 1066; wounded by his son Robert in Normandy, 1077; his queen Matilda, a descendant from Alfred, died in Normandy, 1085; he died at Hermentrude, in Normandy, Sept. 9, 1087; was buried at Caen, and succeeded in Normandy by his eldest son Robert, and in England by his second surviving son,

WILLIAM II, born 1057; crowned Sept. 27, 1087; invaded Normandy with success, 1089; killed by accident as he was hunting in New Forest, by sir Walter Tyrrel, Aug. 2, 1100; was buried at Winchester, and succeeded by his brother,

HENRY I, born 1068; crowned Aug. 5,

1100; married Matilda, daughter of Malcolm king of Scots, Nov. 11 following; defeated his brother Robert, in Normandy, 1107, and sent him prisoner to England; his eldest son shipwrecked and lost in coming from Normandy, 1120; surfeited himself with eating lampreys at Lyons, in Normandy, and died Dec. 1, 1135; was buried at Reading, and succeeded by his nephew Stephen, third son of his sister Adela, by the earl of Blois; though by will he left his dominions to his daughter,

MAUD, born 1101; married to Henry IV, emperor of Germany, 1109; he died 1127, and the English nobility swear fealty to her; married Jeffery Plantagenet, earl of Anjou, 1130; landed in England, and claimed her right to the crown, 1139; crowned, but soon after defeated at Winchester, 1141; retired to France, 1147; and died 1167.

STEPHEN, born 1105; crowned Dec. 26, 1135; taken prisoner at Lincoln by the earl of Gloucester, Maud's brother, 1141, but afterward released for the earl of Gloucester, who was taken at Winchester; his queen Matilda died, 1151; made peace with Henry, Maud's son, 1153; died of the piles at Dover, Oct. 25, 1154; was buried at Feverham, and succeeded by,

HENRY II, grandson of Henry I, born 1133; crowned, with his queen Eleanor, Dec. 19, 1141; invaded Ireland, and conquered it, 1172;

imprisoned his queen, on account of Rosamond his concubine, 1173; did penance at Becket's tomb, 1174; took the king of Scotland prisoner, 1175; had an amour with Alice of France, the intended princess of his son Richard, 1181; his son Richard rebels, 1185; died of grief in Normandy, cursing his sons, July 6, 1189; was buried at Fonteveraud in France, and succeeded by his son,

RICHARD I, born at Oxford, 1157; crowned Sept. 3, 1189; conquered the island of Cyprus, and there married Berengera, daughter of the king of Navarre, 1191; arrested near Vienna, by the duke of Austria, Dec. 20, 1192; ransomed for 40,000l. and returned to England, March 20, 1193; wounded with an arrow at Chalus, in Normandy, and died April 6, 1199; was buried at Fonteveraud, and succeeded by his brother,

JOHN, born 1166; crowned May 27, 1199; divorced his wife Avisla, and married Isabella, daughter of the count of Angoulême, 200; took his nephew Arthur prisoner, 1202, whom he murdered; imprisoned his queen, and banished all the clergy 1208; excommunicated, 1209; surrendered his crown to Pandolf, the pope's legate, May 25, 1213; absolved July 20 following; obliged by the barons to confirm Magna Charta, 1215; died at Newark, Oct. 18, 1216; was buried at Worcester, and succeeded by his son,

HENRY III, born 1207; crowned at Gloucester

ter, Oct. 28, 1216; crowned at Westminster, 1219; married Eleanor, daughter of the count of Provence, 1236; pledged his crown, plate, and jewels for money, 1248; obliged by his nobles to resign the power of a sovereign, and sell Normandy and Anjou to the French, 1258; taken prisoner at Lewes, May 14, 1264; wounded at the battle of Evesham, Aug. 4, 1265; died at Bury St. Edmund's, November 16, 1272; was buried at Westminster, and succeeded by his son,

EDWARD I, born 1239; married Eleanor, princess of Castile, 1253; wounded in the Holy Land with a poisoned dagger, but recovered by his princess sucking out the venom, 1271; proclaimed king on the death of his father, 1272; landed in England, July 25, and crowned, Aug. 19, 1274; reduced the Welsh princes, 1282; his queen died of a fever, 1290; conquered Scotland, 1296, and brought to Westminster their coronation chair, &c; married Margaret, sister to the king of France, 1299; died of a flux at Burgh in Cumberland, July 7, 1307; was buried at Westminster, and succeeded by his son,

EDWARD II, born 1284; created prince of Wales, 1300, and was the first king of England's son that had the title; married Isabel, daughter of the king of France, Jan. 23, 1308; crowned Feb. 24 following; obliged by the barons to vest the government of the kingdom in 21 persons, March 16,

1310; declared his queen and all her adherents enemies to the kingdom, 1325; dethroned Jan. 13, 1327, and succeeded by his son Edward III; was murdered at Berkeley-castle, Sept. 21 following, and buried at Gloucester.

EDWARD III, born at Windsor, 1312; married Philippa, daughter of the earl of Hainault, 1326; accepted the crown on his father's forced resignation, and crowned Jan. 26, 1327; claimed the crown of France, 1329; confined his mother Isabel, and caused her favourite Mortimer to be hanged, 1330; defeated the Scots at Halidown, July 19, 1333; invaded France, and quartered the arms of England and France, 1339; defeated the French at Cressy, Aug. 26, 1346, and his queen took the king of Scotland prisoner the same year; took Calais after a year's siege, Aug. 4, 1347; instituted the order of the Garter, 1349; his queen died, 1369; he died at Richmond, June 21, 1377; was buried at Westminster, and succeeded by his grandson Richard II, son to,

Edward the black prince, born 1330; created duke of Cornwall, 1337, the first in England that bore the title of Duke; created prince of Wales, 1344; defeated the French at Poitiers, Sept. 19, 1356, and brought their king prisoner to London, May 14, 1357; married Joanna, countess dowager of Holland, 1362; died of a consumption, 1376, and was buried at Canterbury.

John of Gaunt, fourth son of Edward III, born 1340; married Blanch, daughter of the duke of Lancaster, 1359, by whom he became possessed of that dukedom and title; she died 1369, and in 1372, he married the daughter of the king of Castile and Leon, and took that title; married Catherine Swinford, 1396, by whom he had four children in the lifetime of his former duchess, who were afterward made legitimate by act of parliament, and from the eldest, Henry VII descended; he died 1399, and was buried in St. Paul's, London.

RICHARD II, born 1367; crowned July 16, 1377; married Ann, sister to the emperor of Germany, 1382, who died 1395; married Isabella, daughter of the king of France, 1396; caused his uncle Thomas duke of Gloucester to be smothered, 1397; taken prisoner by his cousin Henry duke of Lancaster, and sent to the tower, Sept. 1, 1399; resigned his crown Sept. 29 following, and succeeded by Henry IV; was murdered in Pontefract castle, Jan. 1400, and buried at Langley, but removed by Henry V, to Westminster.

HENRY IV, duke of Lancaster, grandson of Edward III, born 1367; married Mary, daughter of the earl of Hertford; who died 1394; fought with the duke of Norfolk, 1397, and banished; returned to England in arms against Richard II, and deposed him Sept. 29, 1399; crowned Oct. 13 following, when he instituted

the order of the Bath; married Joan of Navarre, widow of the duke of Bretagne, 1403; died of an apoplexy, March 20, 1413, was buried at Canterbury, and succeeded by his son,

HENRY V, born 1318; defeated the Welsh in two battles, 1405; crowned April 9, 1413; claimed the crown of France, 1414; gained the victory of Agincourt, Oct. 24, 1415; pledged his regalia for money, to push his conquests, 1416; declared regent, and married Catherine of France, 1420; died of a fistula at Rouen, Aug. 31, 1422; was buried at Westminster, and succeeded by his only son,

HENRY VI, born 1421; succeeded his father, and proclaimed king of France, 1422; crowned at Westminster, Nov. 6, 1429; crowned at Paris, December 17, 1430; married Margaret, daughter of the duke of Anjou, 1445; ordered Humphry duke of Gloucester, his uncle, to be strangled, 1447; taken prisoner at Northampton, July 9, 1460; deposed March 5, 1461, by his fourth cousin, Edward IV; restored to his throne, 1470; taken prisoner again, April 11, 1471; his queen and son taken prisoners at Tewkesbury, by Edward, May 4, the same year, and his son killed in cold blood: he was murdered in the Tower, June 20 following, and buried at Chertsey abbey, but removed to Windsor.

EDWARD IV, descended from the third son of

Edward III, born 1443; elected king March 5, and crowned June 28, 1461; sent the earl of Warwick to demand the sister of the queen of France, and in the mean time married Elisabeth the widow of sir John Grey, 1464; taken prisoner by the earl of Warwick, in Yorkshire, and expelled the kingdom, 1470; returned and gained a great victory at Barnet, April 14, 1471; caused the duke of Clarence, his brother, who had joined the earl of Warwick, to be drowned in a butt of Malmsey wine, 1478; died of an ague April 9, 1483; was buried at Windsor, and succeeded by his son,

EDWARD V, born 1470; conveyed to the Tower, May 1483; deposed June 20 following, and with the duke of York, his brother, supposed to be murdered in the Tower soon after; he was succeeded by his uncle,

RICHARD III, duke of Gloucester, brother to Edward IV, born 1453; made protector of England May 17, elected king June 20, and crowned July 6, 1483; slain in battle at Bosworth field Aug. 22, 1485; was buried at Leicester, and succeeded by,

HENRY VII (see John of Gaunt) born 1455; defeated Richard III, and crowned October 30, 1485; married Elisabeth, daughter of Edward IV, 1486; his eldest son Arthur died, 1502; his queen died in childbed, 1503; married his daughter

Margaret to James IV of Scotland, 1504, from whom James I of England descended; died of a consumption at Richmond, April 22, 1509; was buried at Westminster, and succeeded by his son,

HENRY VIII, born 1491; married Catherine, infanta of Spain, widow of his brother Arthur, June 3, 1509; crowned June 24 following; received the title of Defender of the Faith, 1521; styled Head of the Church, 1531; married Ann Bullen privately, Nov. 14, 1532; divorced Catherine, May 23, 1533; excommunicated by pope Paul, Aug. 30, 1535; Catherine, his first queen, died Jan. 8, 1536; beheaded Ann, his second queen, May 19, and married Jane Seymour, May 20, 1536, who died in childbed, Oct. 12, 1537; suppressed the religious foundations in England and Wales, 1539; married Ann of Cleves, Jan. 6, divorced her July 10, and married Catherine Howard, Aug. 8, 1540; beheaded her and lady Rochford, Feb. 12, 1542; married Catherine Par, his sixth wife, July 12, 1543; died of a fever Jan. 28, 1547; was buried at Windsor, and succeeded by his son,

EDWARD VI, born 1537; crowned Feb. 20, 1547; fell sick of the smallpox and measles, 1552; died of a consumption at Greenwich, July 6, 1553; was buried at Westminster, and succeeded, agreeably to his will, by his cousin,

JANE GRAY, born 1537; proclaimed July 9,

1553; deposed, and sent to the Tower, July 28 following; beheaded, with lord Dudley her husband, Feb. 12, 1554, by the order of,

MARY, daughter of Henry VIII, born Feb. 11, 1516; proclaimed July 19, and crowned Oct. 1, 1553; married Philip of Spain, 1554; died of a dropsy, Nov. 17, 1558; was buried at Westminster, and succeeded by her half-sister,

ELISABETH, born Sept. 7, 1533; sent prisoner to the Tower, 1554; crowned Jan. 15, 1559; imprisoned Mary of Scots, who had fled to England for protection, 1568; solicited in marriage by the duke of Anjou, 1571, till finally rejected, 1581; beheaded Mary of Scots, Feb. 8, 1587; defeated the Spanish armada, 1588; beheaded the earl of Essex, her favourite, Feb. 25, 1601; died at Richmond, March 24, 1603; was buried at Westminster, and succeeded by,

JAMES I (see Henry VII) born June 19, 1556; crowned James VI of Scotland, 1567; married Ann princess of Denmark, 1589; proclaimed king of England, March 24, and crowned July 25, 1603; first styled king of Great Britain, 1604; married his daughter Elisabeth to Frederic prince palatine of the Rhine, 1612, from whom George I descended; lost his queen March 3, 1619; died of an ague at Theobalds, March 27, 1625; was buried at Westminster, and succeeded by his son,

CHARLES I, born Nov. 19, 1600; married Henrietta of France, May 11, 1625; crowned Feb. 2, 1626; went to the House of Commons and demanded five members, Jan. 1642; raised his standard at Nottingham, August 25 following; put himself into the hands of the Scots at Newark, May 5, 1646; sold by the Scots for 200,000*l*. August 8 following; escaped from Hampton-court, July 1648; confined in Windsor-castle Dec. 23 following; removed to St James' Jan. 19, 1649, brought to trial the next day, condemned the 27th, beheaded at Whitehall the 30th, and buried at Windsor.

Oliver Cromwell, born 1599; made protector Dec. 16, 1653; elected king, but refused the title, May 8, 1657; died at Whitehall, Sept. 3, 1658.

Richard Cromwell, born 1623; proclaimed protector, Sept. 4, 1658; deposed April 22, 1659; died at Cheshunt in Hertfordshire, July 12, 1712.

CHARLES II, son of Charles I, born May 29, 1630; escaped into Holland 1648; landed in Scotland 1650; crowned at Scone, Jan. 1, 1651; restored to his throne, May 29, 1660; crowned April 13, 1661; married Catherine, infanta of Portugal, May 21, 1662; died of an apoplexy, Feb. 6, 1685; was buried at Westminster, and succeeded by his brother,

JAMES II, born Oct. 15, 1633; married Ann Hyde, 1660, who died 1671; married the princess

of Modena, 1673; crowned April 23, 1685; fled from his palace Dec. 12, and left England, Dec. 23, 1688; landed at Kinsale, in Ireland, March 12, 1689; returned to France, July 1690; died at St. Germain's, Aug. 6, 1701.

James, duke of Monmouth, natural son of Charles II, landed in England, June 11, and proclaimed king at Taunton, June 20, 1685; was defeated near Bridgewater, July 5, and beheaded on Tower-hill, July 15 following.

WILLIAM III, prince of Orange, born Nov. 4, 1650; married **MARY** (born April 30, 1662) daughter of James II, Nov. 4, 1677; landed in England with an army, Nov. 4, 1688; proclaimed with his princess, king and queen of England, Feb. 13, and crowned April 11, 1689; landed at Carrickfergus, June 14, and defeated James II at the battle of the Boyne, July 1, 1690; lost his queen of the smallpox, Dec. 28, 1694; fell from his horse and broke his collar-bone, Feb. 21, 1702; died at Kensington, March 8 following; was buried at Westminster, and succeeded by his sister-in-law,

ANN, second daughter of James II, born Feb. 6, 1665; married to prince George of Denmark, July 28, 1683; crowned April 23, 1702; lost her son George by a fever, July 29, 1700; settled her revenue of the first-fruits and tenths on the poorer clergy, 1704; passed the act of union,

March 6, 1707; lost her husband of an asthma, Oct. 28, 1708; died of an apoplexy, Aug. 1, 1714; was buried at Westminster, and succeeded by,

GEORGE I, elector of Hanover (see James I) born May 28, 1660; married Sophia daughter of the duke of Brunswick-Zell, 1682; created duke of Cambridge, &c. Oct. 5, 1706; proclaimed Aug. 1, landed at Greenwich Sept. 18, and crowned Oct. 20, 1714; his queen died in Germany, Nov. 2, 1726; died of a paralytic disorder at Osnaburgh, June 11, 1727; was buried at Hanover, and succeeded by his son,

GEORGE II, born Oct. 30, 1683; married the princess Wilhelmina Caroline Dorothea of Brandenburg-Anspach, 1704; crowned Oct. 11, 1727; married his son Frederic, to Augusta princess of Saxe-Gotha, April 27, 1736; lost his queen Nov. 30, 1737; defeated the French at Dettingen, June 16, 1743; lost his son Frederic of a pleurisy, March 20, 1751; died suddenly at Kensington, Oct. 25, 1760; was buried at Westminster, and succeeded by his grandson,

GEORGE III, born June 4, 1738; proclaimed Oct. 26, 1760; married Charlotte Sophia (born May 19, 1744) princess of Mecklenburgh-Strelitz, Sept. 18, 1761; and both were crowned Sept. 22 following.

GOVERNMENT OF ENGLAND.

THE King of Great Britain, though he be not in all respects absolute, yet his dignity and power is very great and extensive. He hath the supreme right of patronage through all England, called patronage-paramount: he is supreme judge, or lord chief justice, and the fountain whence all justice is supposed to be derived. He alone hath power to declare war; to make peace, leagues, and treaties; to send and receive ambassadors, &c. He can convoke, adjourn, prorogue, remove, and dissolve parliaments; and can refuse his assent to any bill which hath passed both houses, without giving a reason. He hath the nomination of all officers at land or sea; of all magistrates, counsellors, and officers of state; of all bishops, and other ecclesiastical dignitaries; of bestowing all honours on the higher and lower nobility. He hath the power of determining rewards and punishments, can pardon crimes, and remit the penalties. He is the guardian of idiots and lunatics, the receptacle of all estates when no heir appears, which then revert or escheat to the king. All treasure trove, or monies, goods, &c. lost, and the owners unknown; all waste ground and lands recovered from the sea; all mines of gold and silver, belong to the king. He is deemed by the laws God's vicegerent, and

therefore is supposed to have no imperfection; and the law attributes to him a kind of perpetuity, for he, being a corporation of himself, lives for ever. He has also abundance of other prerogatives.—The title of the king is, By the grace of God, of Great Britain, France, and Ireland, King, Defender of the Faith: and since the time of king John, he styles himself We, in his public instruments and letters. The title of Sacred Majesty, or Most Excellent Majesty, is given to the king; and in speaking to him is used Sire, or Your Majesty.

The eldest son of the king of England is born duke of Cornwall; afterward he is created prince of Wales, a title first given by Edward V to his eldest son. Since the union of England and Scotland, his titles are, prince of Wales, duke of Aquitaine and Cornwall, earl of Chester and Flint. He is reputed, in law, as the same person with the king.

Next to the king and princes of the blood, are reckoned the great officers of the crown, whereof there are nine, as follow:

1. The Lord High Steward of England; he was formerly the highest officer under the king; but his power was so great, that, since 1399, it was thought too much to be trusted any longer in the hands of any subject. This officer is now made only occasionally, as to officiate at coronations, arraignment of peers, &c. which when over, he

breaks his white staff, and with it his commission expires.

2. The Lord High Chancellor, who is, at present, the highest person in the kingdom next after those of royal blood, in civil affairs. His office is to keep the king's great seal; to moderate the rigour of common law; to judge according to equity, conscience, and reason; and to bestow all ecclesiastical benefices in the king's books under 20*l.* per annum.

3. The Lord High Treasurer, who hath the charge and government of all the king's revenues kept in the exchequer: he is superintendant over all the officers employed in collecting the imposts, customs, tributes, &c. belonging to the crown.

4. The Lord President of the king's privy council, whose office is to attend upon the king, to propose business at the council table, and to report to the king the transactions there.

5. The Lord Privy Seal, under whose hands pass all charters and grants, and pardons signed before they come to the great seal; with divers other matters which do not pass by the great seal.

6. The Lord Great Chamberlain, who presents to the king on the coronation-day all his robes, and other parts of royal attire. To him belongs the care of providing all things in the House of Lords in the time of parliament; also the government of the whole palace of Westminster; and the fur-

nishing of Westminster-hall against coronations, trials of peers, &c. He disposes of the sword of state to what lord he pleases to be carried before the king, and goes himself on the right hand of the sword next the king's person, and the Lord Marshal on the left.

7. The Lord High Constable; whose power and jurisdiction was anciently so great, that since 1521, it was thought too much for any subject. This officer is now created only on occasions of coronations, trials by combat, &c. His power and authority are the same with the Earl Marshal, with whom he sits judge in the Marshal's Court, and takes place of the Earl Marshal.

8. The Earl Marshal, whose office is to take cognizance of all matters of wars and arms, to determine contracts concerning deeds of arms out of the realm upon land, and of war within the realm, which cannot be determined by common law: he formerly had several courts under him, but now only the Marshalsea.

9. The Lord High Admiral, who is intrusted with all maritime affairs; as well civil as military: he hath power to commissionate a vice-admiral, rear-admiral, all sea captains, and other officers at sea. To him belong all penalties, amerciaments, goods of pirates, felons, &c. as also all stray-goods, wrecks at sea, deodands, &c.

These are the great streams of government, po-

Jicy, and rule, which flow from the original fountain, the king, to the common people of the realm; among whom it subdivides, in various ways, into lesser currents of power and authority.

The great courts or judicature, civil and military, are seven in number, as follow :

1. The Privy Council, which is that august assembly wherein the king is advised and counselled; and which consults for the honour, defence, safety and benefit of the realm; not meddling with matters which may be determined by the ordinary courts of justice, but matters of complaint and sudden emergencies. The members of this honorable council are such as the king, of his own pleasure, shall choose; and are generally of the highest rank, eminent for wisdom, integrity, &c. They sit at the council-board, when his majesty presides; and at all debates the lowest delivers his opinion first, and the king last of all declares his judgement.

2. The Parliament, which is the most high and honorable court, wherein the most supreme and absolute power of the realm consists. This high court or assembly consists of two parts or houses, called the Higher and Lower House of Parliament. The members are of three sorts, viz. the peerage and barony, who represent the higher part of the commonwealth; the knights, citizens, and burghesses, who represent the lower part; and the bishops or prelates, who represent the clergy: over

all which the king himself presides. The place of meeting is in the king's ancient palace of Westminster; the Lords in one room, and the Commons in another. The King, Lords, and Commons, must all, or the greatest part, agree to the making of laws and repealing them. When a bill has passed through both houses, with consent, and received the assent of the king, in parliament assembled, it is called an act of parliament, a statute and ordinance, a rule and law of the land.

3. The High Court of Chancery, because it is designed to mitigate the rigour of the other courts of judicature, is called the court of equity; and is the original of all other courts. The judge of this court is the Lord Chancellor, or Lord Keeper of the Great Seal, whose sentence is definitive without a jury of twelve men. The judge hath twelve assistants, called Masters of Chancery, the first of whom is Master of the Rolls, a place of great dignity. Another officer, who continually attends the judge, is the Clerk of the Crown, an office of very high importance. There are also many other officers in this court, which render suits very chargeable and tedious.

4. The Court of King's Bench, which is next to the Parliament, is the highest court at common law. In it are handled the pleas of the crown, or all things which concern the loss of life or member of any subject; as also all treasons, felonies, op-

pressions, misgovernments, &c. In this court are four judges, the first of whom is called the Lord Chief Justice of the King's Bench, whose power and jurisdiction is very great.

5. The Court of Common Pleas, so called because therein are debated the usual and common pleas between subject and subject, according to the strictest rules of law. None but serjeants at law may plead in this court. The first judge is called the Lord Chief Justice of the Common Pleas; and there are commonly three inferior judges.

6. The Court of Exchequer, in which are held two courts, one of law, the other of equity. In this court may sit the Lord Treasurer, the Chancellor of the Exchequer, the Lord Chief Baron, three other Barons of the Exchequer, and the Cursitor Baron. This court tries all causes relating to the king's treasury or revenue, as touching accounts, disbursements, customs, and all fines imposed on any man.

7. The Court of Admiralty, which is the principal or supreme of the courts held by and under the Lord High Admiral. It takes cognizance of all affairs, civil and military, on the seas, which are within the jurisdiction of the common law: therefore the proceedings in this court in all civil matters, are according to the civil law, and run in the name of the admiral, and not of the king, as in common law. In this court he has a lieutenant

called Judge of the Admiralty, who is commonly some learned doctor of the civil law.

These are the great and high tribunals, or courts of judicature, established for the public administration of justice and equity.

For the government of the several counties the king has deputed and commissioned several officers with power and authority to put in force and execute the laws upon the subject. These are, the justices of the peace, whose office it is to charge and keep the peace of the county, and to examine and commit to prison all who break or disturb the same, and disquiet the king's subjects. In order to this, they hold quarterly meetings at some of the principal towns, where a jury of twelve men, called the grand inquest, is summoned to appear, who, upon oath, are to inquire into the cases of all delinquents, and to present them by bill guilty of the indictment, or not guilty; the justices, after trial, punish the former or commit them for further trial at the next assizes, and acquit the innocent. This is called the quarter-sessions for the county. Sheriffs of the county, or the high-sheriff, whose business it is to execute the king's mandates, and all writs directed to him out of the king's court, to impanel juries, to bring causes and criminals to trial, to see the sentences, both in civil and criminal affairs, executed, and to wait on and guard the judges twice a year in their

circuits for the assizes. Under the sheriff are various officers, as under-sheriff, clerks, stewards, bailiffs, constables, goalers, beadles, &c. Bailiff of the hundred, a very ancient officer, but now of small authority. High constable was first ordained for the conservation of the peace, and view of armour: he disperses warrants and orders of the justices of the peace to each petty constable. Coroners are two in each county, who are to inquire, by a jury of neighbours, how, and by whom, any person came by a violent death, and to enter it on record as a plea of the crown; whence they have their name crowners or coroners. The clerk of the market, whose office is to keep a standard of all weights and measures exactly agreeing with the king's standard in the Exchequer, to seal all weights and measures made exactly by the standard in his custody, and to destroy such as are otherwise.

COUNTIES OF ENGLAND.

ANGLESEY, is a maritime county, and the most western part of North Wales, 60 miles in circumference, containing 200,000 acres, 74 parishes, and 2 market-towns. It is a fertile island, being encompassed by the sea and the river Menai; and produces good millstones, copper, and fine white clay. It sends 2 members to parliament;

and the chief town is Beaumaris, 10 miles NNE of Carnarvon and 241 NW of London.

BEDFORDSHIRE, is an inland county, 73 miles in circumference, containing 205,120 acres, 124 parishes, and 11 market-towns. It is diversified with fruitful plains and rising hills; and the principal rivers are the Ouse and Ivel. It is noted for producing fullers earth, and has manufactures of straw goods and bonelace.* It sends 4 members to parliament; and Bedford is the county-town, 27 miles E by N of Buckingham and 50 N by W of London.

BERKSHIRE, is an inland county, 120 miles in circumference, containing 527,000 acres, 140 parishes, and 12 market-towns. The east part has some barren land, but the soil in general is very fruitful. The principal rivers are the Thames, Kennet, Lambourn, and Loddon. The chief manufacture is woollen cloth; and it sends 9 members to parliament. Reading, 26 miles SSE of Oxford and 39 W of London, is the county-town; and Windsor is famous for its castle.

BRECKNOCKSHIRE, is an inland county of South Wales, 106 miles in circumference, containing 620,000 acres, 61 parishes, and 4 market-towns. It abounds with mountains, some of which are exceedingly high; but there are large plains and vallies that are very fertile. The rivers Usk and Wye run through it. It sends 2

members to parliament; and the county-town is Brecknock, 34 miles NW of Monmouth and 162 w by N of London.

BUCKINGHAMSHIRE, is an inland county, 138 miles in circumference, containing 441,100 acres, 185 parishes, and 11 market-towns. The soil is rich, being mostly chalk or marle; and the principal rivers are the Thames, Coln, Ouse, and Tame. The most general manufactures are bone-lace and paper; and it sends 14 members to parliament. Buckingham, 25 miles NE of Oxford and 57 NW of London, is the county-town; and Eton is famous for its college.

CAMBRIDGESHIRE, is an inland county, 130 miles in circumference, containing 570,000 acres, 163 parishes, 1 city (Ely) and 7 market-towns. The soil of the south parts is very good, but the north fenny; and it is famous for producing butter and saffron. The chief rivers are the Ouse, Nen, and Cam; and it sends 6 members to parliament. Cambridge, 18 miles ESE of Huntingdon and 51 N by E of London, is the county-town, and a very ancient university, consisting of 12 colleges and 4 halls.

CARDIGANSHIRE, is a maritime county of South Wales, 94 miles in circumference, containing 520,000 acres, 64 parishes, and 6 market-towns. The northeast part is mountainous, but to the west and south are fruitful plains; and it

abounds with veins of lead and silver ore. The principal rivers are the Tyvy, Rydal, and Iftwith. It fends 2 members to parliament; and the county-town is Cardigan, 24 miles NW. of Carmarthen and 225 WNW of London.

CARMARTHENSHIRE, is a maritime county of South Wales, 102 miles in circumference, containing 700,000 acres, 87 parishes, and 8 market-towns. The soil, in general, is fertile, but the east part is mountainous; and it has plenty of coal and lime. The principal rivers are the Towy, Tyvy, and Taafe. It fends 2 members to parliament; and the chief town is Carmarthen, 30 miles ENE of Pembroke and 207 W by S of London.

CARNARVONSHIRE, is a maritime county of North Wales, 95 miles in circumference, containing 370,000 acres, 68 parishes, 1 city (Bangor) and 5 market-towns. It abounds with high mountains, lakes, and rocks; but there are several fruitful bottoms and vallies, and mines of copper and lead among the hills. The principal rivers are the Conway and Seirit. It fends 2 members to parliament; and Carnarvon is the county-town, 34 miles W of Denbigh and 252 NW of London.

CHESHIRE, is a maritime county palatine, 182 miles in circumference, containing 720,000 acres, 101 parishes, 1 city, and 12 market-towns. The soil is very good; and it is famous for cheese and fine white salt. The principal rivers are the

Mersey, Weaver, Dee, and Dane. It sends 4 members to parliament; and the chief place is the city of Chester, 41 miles N of Shrewsbury and 182 NW of London.

CORNWALL, is a maritime county, 230 miles in circumference, containing 960,000 acres, 161 parishes, and 27 market-towns. It is a perfect peninsula, and both the most southern and western county; abounding with mines of tin and copper, and producing excellent moorstone, fine clays, and rock chrystals. The surface, in general, is hilly and rocky, covered with shallow earth, though there are many fruitful vallies near the sea. The principal rivers are the Tamar, Camel, and Fale. It sends 44 members to parliament; and the chief town is Launceston, 41 miles W of Exeter and 214 W by S of London.

CUMBERLAND, is a northern maritime county, 168 miles in circumference, containing 1,040,000 acres, 90 parishes, 1 city, and 14 market-towns. The land, for the most part, is hilly; but the vallies are fruitful. It is noted for mines of black-lead, the best in the world; there are also others of coal, copper, and lapis calaminaris. The chief rivers are the Eden and Derwent, and it has several fine lakes. It sends 6 members to parliament; and the principal place is the city of Carlisle, 57 miles W by S of Newcastle and 301 NNW of London.

DENBIGHSHIRE, is a maritime county of North Wales, 116 miles in circumference, containing 410,000 acres, 57 parishes, and 4 market-towns. The land is hilly, intermixed with fruitful vallies; and it has mines of lead and coal. The principal rivers are the Clwyd, Elwy, Dee, and Conway; and it sends 2 members to parliament. Wrexham is the largest town, but Denbigh is the county-town, 27 miles w of Chester and 208 NW of London.

DERBYSHIRE, is an inland county near the middle of England, 130 miles in circumference, containing 680,000 acres, 106 parishes, and 11 market-towns. In the north part, among the mountains of the Peak, the soil is stony; but in the south there is some very rich land. It is famous for lead, iron, coal, and marble; for a manufacture of porcelain; and for the first silk-mill and first cotton-mill erected in England. The principal rivers are the Trent, Derwent, Dove, and Erwash. It sends 4 members to parliament; and Derby is the county-town, 16 miles w of Nottingham and 126 NNW of London.

DEVONSHIRE, is a southwest maritime county, 200 miles in circumference, containing 1,920,000 acres, 394 parishes, 1 city, and 37 market-towns. The aspect of the country is various, and the soil barren on the hills, but remarkably fruitful in the vallies. It is noted for cider and perry; has mines

of tin, copper, and other metals; and great quantities of marble. The principal rivers are the Tamar, Ex, Teigne, and Dart. It sends 26 members to parliament; and the chief place is the city of Exeter, 78 miles sw of Bristol and 173 w by s of London.

DORSETSHIRE, is a southern maritime county, 150 miles in circumference, containing 772,000 248 parishes, and 22 market-towns. The soil is sandy, except in some rich plains and vallies. It produces freestone, marble, and tobacco-pipe clay; has linen and woollen manufactures; and is noted for fine ale and beer. The principal rivers are the Stour and Frome. It sends 20 members to parliament; and the county-town is Dorchester, 57 miles s of Bristol and 120 w by s of London.

DURHAM, is a northern maritime county, commonly called the Bishopric of Durham, 107 miles in circumference, containing 610,000 acres, 113 parishes, 1 city, and 7 market-towns. The western angle is hilly, and in general barren; the middle and eastern parts are pretty fruitful. It produces coal, iron, and lead, and is famous for fine mustard. The principal rivers are the Wear, Tees, Tyne, and Derwent. It sends 4 members to parliament; and the city of Durham is the capital, 14 miles s of Newcastle and 257 n by w of London.

ESSEX, is an eastern maritime county, 146

miles in circumference, containing 1,240,000 acres, 415 parishes, and 24 market-towns. The soil is very fruitful, except in the marshes near the sea. It is noted for the best saffron in the world, and also for oysters. The principal rivers are the Thames, Blackwater, Coln, Chelmer, Stour, Crouch, and Roding; and it sends 8 members to parliament. Colchester is the largest town, but Chelmsford is the county-town, 29 miles ENE of London and 48 SSE of Cambridge.

FLINTSHIRE, is a maritime county of North Wales, 40 miles in circumference, containing 16,000 acres, 28 parishes, 1 city, and 1 market-town. It is full of hills, intermixed with a few vallies, which are very fruitful. It produces limestone, coal, lead, and calamine. The principal rivers are the Dee, Clwyd, and Wheeler; and it sends 2 members to parliament. The city of St. Asaph is a very poor place; Holywell is the largest town; but Flint, so inconsiderable as to have no market, is the county-town, 12 miles W by N of Chester and 193 NW of London.

GLAMORGANSHIRE, is a maritime county of South Wales, 112 miles in circumference, containing 540,000 acres, 118 parishes, 1 city, and 8 market-towns. The northern part is mountainous and barren, but near the sea there are rich and fertile plains. It produces limestone, coal, lead, and iron. The principal rivers are the

Rumney, Taafé, Elwy, Neath, and Tawy; and it sends 2 members to parliament. The city of Landaff is so small as to have no market; and the county-town is Cardiff, 32 miles s by E of Brecknock and 164 w of London.

GLOUCESTERSHIRE, is an inland county, 156 miles in circumference, containing 800,000 acres, 280 parishes, 1 city, and 27 market-towns. The soil is extremely fruitful, except in the east part, which is hilly. It has mines of coal and iron, and is famous for cheese. The principal rivers are the Severn, Avon, Wye, and Coln. It sends 8 members to parliament; and the city of Gloucester is the principal place, 24 miles NE of Bristol and 106 w by N of London.

HAMPSHIRE, is a southern maritime county, 150 miles in circumference, exclusive of the Isle of Wight, and containing 1,312,500 acres, 253 parishes, 1 city, and 20 market-towns. The soil is various, but fertile in general; and it is famous for bacon, honey, and timber. The principal rivers are the Avon, Test, Itchen, and Stour. It sends, with the Isle of Wight, 26 members to parliament. The assizes are held at the city of Winchester, where there is a noble college; but Southampton is deemed the county-town, 22 miles SE of Salisbury and 75 WSW of London.

HEREFORDSHIRE, is an inland county, 130 miles in circumference, containing 451,000 acres,

176 parishes, 1 city, and 8 market-towns. The soil is fruitful, especially in the vales; and it is noted for wool and cider. The principal rivers are the Wye, Mynnow and Lug. It sends 8 members to parliament; and the city of Hereford is the capital, 24 miles wsw of Worcester and 130 wnw of London.

HERTFORDSHIRE, is an inland county, 130 miles in circumference, containing 45,000 acres, 174 parishes, and 19 market-towns. The soil is fruitful; and the principal rivers are the Lea, Stort, and Coln. It sends 6 members to parliament; and Hertford is the county-town, 21 miles n of London and 33 sse of Bedford.

HUNTINGDONSHIRE, is an inland county, 67 miles in circumference, containing 196,000 acres, 29 parishes, and 6 market-towns. The soil, except in the fenny parts, is generally rich; and the principal rivers are the Ouse and Nen. It sends 4 members to parliament; and Huntingdon is the county-town, 16 miles wnw of Cambridge and 59 n by w of London.

KENT, is a maritime county, and the southeast angle of England, 162 miles in circumference, containing 1,248,000 acres, 408 parishes, 2 cities, and 29 market-towns. In the lower parts are fens and marshes, but the soil in general is fertile. It has iron mines, and is noted for hops, apples, and cherries. The sea and the river Thames almost

encompass it; and the other principal rivers are the Medway, Darent, Stour, Cray, and Rother. It sends 18 members to parliament. Canterbury, an archbishopric, and Rochester, a bishopric, are the chief places; but Maidstone is the county-town, 35 miles *SE* of London and 55 *E* of Guilford.

LANCASHIRE, is a northwest maritime county, 170 miles in circumference, containing 1,150,000 acres, 63 parishes, and 27 market-towns. The soil is fruitful in some parts, in others hilly and barren, and in the flats are black turf bogs of great extent. It is famous for potatoes, and a species of coal, called cannel, capable of being manufactured into cups, standishes, &c. The principal rivers are the Mersey, Ribble, Lon, and Irwell; and it sends 14 members to parliament. Liverpool and Manchester are the largest towns; but Lancaster is the county-town, 67 miles *S* of Carlisle and 235 *NNW* of London.

LEICESTERSHIRE, is an inland county, near the middle of England, 96 miles in circumference, containing 560,640 acres, 200 parishes, and 12 market-towns. The soil in the southern part is fruitful, but barren and stony in the northern. It abounds in coal and limestone; and the chief manufacture is stockings. The principal rivers are the Avon, Soar, Wreke, Anker, and Welland. It sends 4 members to parliament; and the

county-town is Leicester, 27 miles s of Nottingham, and 99 NNW of London.

LINCOLNSHIRE, is a northeast maritime county, 180 miles in circumference, containing 1,740,000 acres, 630 parishes, 1 city, and 31 market-towns. It is divided into three parts, Lindsay on the north, Kesteven on the southwest, and Holland on the southeast; the latter abounds with fens and marshes, but the soil in many parts of it, and in the other divisions, is fertile. The principal rivers are the Humber, Trent, Witham, and Welland. It sends 12 members to parliament; and the capital is the city of Lincoln, 36 miles NE of Nottingham and 133 N of London.

MERIONETHSHIRE, is a maritime county of North Wales, 108 miles in circumference, containing 500,000 acres, 37 parishes, and 4 market-towns. It is a wild and mountainous region; but the soil in many parts affords food for large flocks of sheep, the wool of which is manufactured into stockings and flannels. The principal rivers are the Dee and Dovy. It sends but 1 member to parliament; and the chief town is Harlech, 28 miles SE of Carnarvon and 223 NNW of London.

MIDDLESEX, is an inland county, 81 miles in circumference, containing 190,000 acres; and has 73 parishes, and 4 market-towns, exclusive of London and Westminster. The soil in general is fertile; but there are extensive tracts of unculti-

vated heath. The principal rivers are the Thames, Lea, and Coln; and another called the New River, which is artificially brought from Hertfordshire to supply London with water. This county, though the most populous, sends only 8 members to parliament. Brentford, 7 miles w of London, is deemed the county-town; but the city of London is the metropolis of all England.

MONMOUTHSHIRE, is an inland county, bordering on the mouth of the river Severn, 94 miles in circumference, containing 560,000 acres, 127 parishes, and 7 market-towns. It is mountainous and woody, but the soil is fruitful, especially in the vallies. The chief manufacture is flannel; and the principal rivers, beside the Severn, are the Wye, Mynnow, Rumney, and Ufk. It sends 3 members to parliament; and the county-town is Monmouth, 18 miles s of Hereford and 128 w by n of London.

MONTGOMERYSHIRE, is an inland county of North Wales, 94 miles in circumference, containing 560,000 acres, 47 parishes, and 5 market-towns. Though barren and mountainous in many parts, it has some fertile plains and vallies; and it abounds with slate, lime, and lead. The principal rivers are the Severn, Vyrnew, and Tannat. It sends 2 members to parliament; and Montgomery is the chief town, 24 miles sw of Shrewsbury and 161 nw of London.

NORFOLK, is an eastern maritime county, 140 miles in circumference, containing 1,480,000 acres, 660 parishes, 1 city, and 32 market-towns. The soil is various, being rich in some places, and in others light and sandy. The chief rivers are the Ouse, Nen, Waveney, and Yare. The manufactures are silk, woollen, and worsted. It sends 12 members to parliament; and the city of Norwich is the principal place, 43 miles N of Ipswich and 109 NE of London.

NORTHAMPTONSHIRE, is an inland county, 120 miles in circumference, containing 550,000 acres, 330 parishes, 1 city (Peterborough) and 12 market-towns. It is a sporting country, and the soil very fertile; but fuel is scarce and very dear. The principal rivers are the Nen and Welland. It sends 9 members to parliament; and Northampton is the county-town, 32 miles S of Leicester and 66 NW of London.

NORTHUMBERLAND, is a maritime and the most northern county of England, 155 miles in circumference, containing 1,370,000 acres, 460 parishes, and 12 market-towns. The northwest part is heathy and mountainous, but the land on the coast is plain and fruitful. It has some rich lead mines, and is famous for great plenty of coal. The chief rivers are the Tyne, Tweed, and Coquet; and it sends 8 members to parliament. Alnwick is the county-town, but the principal

place is Newcastle, 57 miles E by N of Carlisle and 271 N by W of London.

NOTTINGHAMSHIRE, is an inland county, 90 miles in circumference, containing 560,000 acres, 168 parishes, and 9 market-towns. The soil to the south and east is fertile, but that to the west is sandy and barren. It abounds with coal; and the chief manufacture is stockings. The principal rivers are the Trent and Idle. It sends 8 members to parliament; and Nottingham is the county-town, 16 miles E of Derby and 123 N by W of London.

OXFORDSHIRE, is an inland county, 138 miles in circumference, containing 534,000 acres, 280 parishes, 1 city, and 12 market-towns. The southeast part is hilly and woody, the northwest part elevated and stony, and the middle plain and fertile. Its hills yield ochre, pipe-clay, and other earths. The principal rivers are the Thames, Windrush, Evenlode, Cherwel, and Tame; and it sends 9 members to parliament. The city of Oxford, 24 miles sw of Buckingham and 54 w by N of London, is the capital, and a celebrated university, consisting of 20 colleges and 5 halls.

PEMBROKESHIRE, is a county of South Wales, nearly surrounded by the sea, 93 miles in circumference, containing 420,000 acres, 145 parishes, 1 city (St. David's) and 5 market-towns. The northeast part is mountainous, but the vallies and

bottoms near the sea are fertile. It produces limestone, coal, and iron. The principal rivers are the East and West Cledheu. It sends 3 members to parliament; and the county-town is Pembroke, 38 miles ssw of Cardigan and 237 w by n of London.

RADNORSHIRE, is an inland county of South Wales, 90 miles in circumference, containing 320,000 acres, 52 parishes, and 4 market-towns. The east and south parts are fruitful, but the other parts are rude and mountainous. The principal rivers are the Wye and Tend; and it sends 2 members to parliament. The assizes are held at Presteign; but the chief town is Radnor, 24 miles nw of Hereford and 156 wnw of London.

RUTLANDSHIRE, is an inland county, and the least in England, being only 40 miles in circumference, and containing 82,140 acres, 48 parishes, and 2 market-towns. The soil is fertile; and it has large quarries of limestone. The principal rivers are the Welland and Guash. It sends 2 members to parliament; and the county-town is Oakham, 22 miles e of Leicester and 95 n by w of London.

SHROPSHIRE, is an inland county, 134 miles in circumference, containing 890,000 acres, 170 parishes, and 16 market-towns. It has many hills and mountains, but the soil is pretty fertile every where. It abounds with limestone, lead, copper,

iron, and coal. The principal rivers are the Severn and Tend. It sends 12 members to parliament; and Shrewsbury is the county-town, 34 miles w by s of Stafford and 154 NW of London.

SOMERSETSHIRE, is a western maritime county, 150 miles in circumference, containing 1,075,000 acres, 385 parishes, 3 cities, and 31 market-towns. The soil is very fertile, except on the hills and in the marshy parts; and the hills abound with coal, lead, calamine, copper, manganese, bole, and red ochre. The principal rivers are the Parret, Ivel, Thone, Brent, and Avon. It sends 18 members to parliament. The chief place is the city of Bristol, 34 miles ssw of Gloucester and 114 w of London; and the other cities are Bath and Wells.

STAFFORDSHIRE, is an inland county, 141 miles in circumference, containing 810,000 acres, 130 parishes, 1 city (Lichfield) and 17 market-towns. The north part, called the Morlands, is a wild hilly country, and the soil to the south is good and rich, though not without heaths; but these, and the hills, abound in coal and iron: it is also famous for manufactures of fine earthen ware. The principal rivers are the Trent, Dove, and Stow. It sends 10 members to parliament; and the county-town is Stafford, 46 miles se of Chester and 135 NW of London.

SUFFOLK, is an eastern maritime county, 165

miles in circumference, containing 995,000 acres, 575 parishes, and 28 market-towns. The ground is generally level, but the soil various; and the principal produce is butter. The chief rivers are the Stour, Waveney, Little Ouse, and Orwell; and it sends 16 members to parliament. The assizes are held at Bury St. Edmund's; but Ipswich is the largest town, 53 miles E by S of Cambridge and 69 NE of London.

SURRY, is an inland county, 112 miles in circumference, containing 592,000 acres, 140 parishes, and 11 market-towns, including Southwark, which is a suburb to London. The soil in the middle parts is barren and full of heaths, but in others very fertile; and it is noted for hops. The principal rivers are the Thames, Wey, Mole, and Wandle. It sends 14 members to parliament; and (excluding Southwark) Guildford is the principal town, 30 miles SW of London and 33 NNE of Chichester.

SUSSEX, is a southern maritime county, 158 miles in circumference, containing 1,140,000 acres, 142 parishes, 1 city, and 16 market-towns. The soil is rich and fruitful in the middle, but high and chalky on the seacoast; and it produces wool, wood, chalk, and iron. The principal rivers are the Arun, Adur, Ouse, and Rother; and it sends 18 members to parliament. The assizes are held at Lewes; but the principal place is the

city of Chichester, 26 miles E by S of Southampton and 61 SW of London.

WARWICKSHIRE, is an inland county, 110 miles in circumference, containing 670,000 acres, 158 parishes, 1 city, and 12 market-towns. The soil is very fertile; and it produces coal, iron, and limestone. The principal rivers are the Avon, Tame, and Arrow. It sends 6 members to parliament; and is noted for manufactures of hardware, tammies, and ribands. Birmingham and the city of Coventry are the largest towns; but Warwick is the county-town, 32 miles E by N of Worcester and 93 NW of London.

WESTMORLAND, is an inland county, bordering on the mouth of the Ken, 110 miles in circumference, containing 510,000 acres, 26 parishes, and 8 market-towns. It is a region of lofty mountains and barren moors, but there are some fruitful vallies; and it abounds with slate of the finest quality. The principal rivers, beside the Ken, are the Eden and Lune; and it is noted for several fine lakes. It sends 4 members to parliament; and has manufactures of woollen cloth and stockings. Kendal is the largest town, but the county-town is Appleby, 32 miles SE of Carlisle and 266 NNW of London.

WILTSHIRE, is an inland county, 128 miles in circumference, containing 876,000 acres, 304 parishes, 1 city, and 20 market-towns. It has

many hills and extensive downs, but the vales and bottoms are very fertile. It produces cheese, wool, wood, and stone. The chief rivers are the Avon, Nadder, Willy, and Bourne. It sends 34 members to parliament, and is noted for manufactures of carpets and fine woollen cloth. The principal place is the city of Salisbury, 48 miles SE of Bristol and 82 W by S of London.

WORCESTERSHIRE, is an inland county, 130 miles in circumference, containing 540,000 acres, 152 parishes, 1 city, and 10 market-towns. The surface is diversified with hill and vale, and the soil in the plains and vallies is exceedingly fertile. It produces wool, hops, perry, salt, and iron; and is famous for manufactures of porcelain, carpets, and woollen stuffs. The principal rivers are the Severn, Tend, Salwarp, Stour, and Avon. It sends 9 members to parliament, and the capital is the city of Worcester, 26 miles N of Gloucester and 118 WNW of London.

YORKSHIRE, is a northeast maritime county, and larger than any two of the largest counties in England, being 360 miles in circumference, and containing 3,770,000 acres, 563 parishes, 1 city, and 54 market-towns. It is divided into three parts called Ridings, the north, east, and west; the last is much the largest. The soil is, in general, very fruitful, but in so extensive a country it must be various, and also the productions and

manufactures. The chief rivers are the Ouse, Don, Derwent, Aire, Calder, Warf, Nidd, Ure, and Hull, which all terminate in the Humber, between this county and Lincolnshire. It sends 30 members to parliament. The principal town in the north riding is Scarborough; in the east, Kingston upon Hull, commonly called Hull; and in the west, Leeds; but York, in the central point of the ridings, is the capital of the county, and the see of an archbishop, 70 miles s by e of Durham and 197 n by w of London.

Beside these 52 counties, there are counties corporate, or certain districts to which the liberties and jurisdictions peculiar to a county have been granted, by charter from the throne. Thus the city of London is a county distinct from Middlesex; and the cities of York, Lincoln, Chester, Bristol, Norwich, Coventry, Worcester, and the towns of Southampton, Kingston upon Hull, and Newcastle upon Tyne, are counties of themselves, distinct from those in which they are situate.



THE END.

Printed by M. Brown, St. John's Square.

